U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

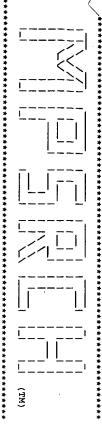
#### **SEARCH REQUEST FORM**

5-54

Requestor's Name:		Serial Number:		
Date:	Phone:		t Unit:	
terms that may have a special	ent of search topic. Describe specif meaning. Give examples or relever quence. You may include a copy of	nt citations, authors, keyword	is, etc., if known. For seq	efine any uences,
\$ -				
	STAFF U	SE ONLY		
Date completed: 5-7- Searcher: MA Terminal time: CPU time: Total time: Number of Searches:	-RK	STIC  CM-1  Pre-S  De of Search  N.A. Sequence  A.A. Sequence	Vendors	1 PSR CH
Number of Databases:		Structure	DARC/O	Queste l

PTO-1590 (9-90)

•				
		*	7	
				•
			ž.	
			,	
				,
				·
	·			
	·			



Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

Run on: MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm Wed May 6 08:18:28 1998; MasPar time"3.90 Seconds 375.094 Million cell updates/sec

Tabular output not generated.

Description: Perfect Score: Sequence: >US-08-804-166-2 (1-256) from US08804166.pep 1994 1 SRTSLLLAFGLLCLPWLQEG......GFKVENHTGCHCSTCYYHKS 256

Searched: 62627 seqs, 5720858 residues

Scoring table:

PAM 150 Gap 11

Post-processing: Minimum Match 0% Listing first 45 summaries

Database:

a-1ssued 1:backl 2:51 3:52 4:53 5:54 6:55 7:56 8:57 9:PCT90 10:PCT91 11:PCT92 12:PCT93 13:PCT94 14:PCT95 15:PCT96

Statistics: Mean 29.680; Variance 124.309; scale 0.239

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

Ouery Match Length DB ID Description Pred. No. 1124 56.4 455 7 US-08-321 Sequence 2, Applicatio 1.28e-100 1125 55.9 199 7 US-08-050 Sequence 45, Applicatio 1.15e-87 996 49.9 167 7 US-08-050 Sequence 2, Applicatio 1.15e-87 981 49.2 124 7 US-08-050 Sequence 4, Applicatio 1.15e-87 981 49.2 124 7 US-08-050 Sequence 57, Applicatio 1.15e-87 981 49.2 124 7 US-08-050 Sequence 58, Applicatio 1.15e-87 981 49.2 124 7 US-08-050 Sequence 59, Applicatio 1.15e-87 981 49.2 124 7 US-08-050 Sequence 50, Applicatio 1.15e-87 981 49.2 124 7 US-08-050 Sequence 50, Applicatio 1.67e-54 16.2 11.3 32 10 US-08-050 Sequence 50, Applicatio 1.67e-54 16.2 16.2 16.2 16.2 16.2 16.2 16.2 16.2	10 8 8 8 9 8 8 9 8 9 8 9 8 9 8 9 8 9 9 8 9	755455P	Result
DB ID Description Pred. N  1.28e- 1.27 US-08-321- Sequence 2, Applicati 1.28e- 1.28e-050- Sequence 25, Applicati 1.05e- 1.28e-050- Sequence 27, Applicati 1.05e- 1.28e-050- Sequence 27, Applicati 1.05e- 1.28e-050- Sequence 27, Applicati 1.15e- 1.28e-050- Sequence 4, Applicati 1.15e- 1.28e-050- Sequence 50, Applicati 1.15e- 1.28e-050- Sequence 54, Applicati 1.67e- 1.28e-050- Sequence 54, Applicati 1.67e- 1.28e-050- Sequence 26, Applicati 2.30e- 1.28e-050- Sequence 27, Applicati 1.31e- 1.28e-050- Sequence 28, Applicati 1.31e- 1.28e-050- Sequence 27, Applicati 1.31e- 1.28e-050-050-050-050-050-050-050-050-050-05	666 666 477 339 324 318 318 225 225 221 221 221 210 210 210 210 210 218 318 318 318 318 318 318 318 318 318 3	1124 1124 1115 996 981	Score
DB ID Description Pred. N  1.28e- 1.27 US-08-321- Sequence 2, Applicati 1.28e- 1.28e-050- Sequence 25, Applicati 1.05e- 1.28e-050- Sequence 27, Applicati 1.05e- 1.28e-050- Sequence 27, Applicati 1.05e- 1.28e-050- Sequence 27, Applicati 1.15e- 1.28e-050- Sequence 4, Applicati 1.15e- 1.28e-050- Sequence 50, Applicati 1.15e- 1.28e-050- Sequence 54, Applicati 1.67e- 1.28e-050- Sequence 54, Applicati 1.67e- 1.28e-050- Sequence 26, Applicati 2.30e- 1.28e-050- Sequence 27, Applicati 1.31e- 1.28e-050- Sequence 28, Applicati 1.31e- 1.28e-050- Sequence 27, Applicati 1.31e- 1.28e-050-050-050-050-050-050-050-050-050-05		55 55 55 55 55 55 55 55 55 55 55 55 55	Query Match I
US-08-321 Sequence 2, Applicati 1.28e-US-08-050 Sequence 48, Applicati 1.05e-US-08-050 Sequence 57, Applicati 1.15e-US-08-050 Sequence 57, Applicati 1.15e-US-08-050 Sequence 57, Applicati 1.15e-US-08-050 Sequence 57, Applicati 3.78e-US-08-050 Sequence 50, Applicati 1.67e-US-08-050 Sequence 54, Applicati 1.67e-US-08-050 Sequence 52, Applicati 2.30e-US-08-050 Sequence 26, Applicati 2.30e-US-08-050 Sequence 27, Applicati 2.30e-US-08-050 Sequence 28, Applicati 3.10e-US-08-292 Sequence 29, Applicati 3.10e-US-08-292 Sequence 4, Applicati 3.06e-US-08-292 Sequence 5, Applicati 3.06e-US-08-292 Sequence 6, Applicati 3.06e-US-08-292 Sequence 2, Applicati 8.68e-US-08-255 Sequence 2, Applicati 8.68e-US-08-2570 Sequence 2, Applicati 8.68e-US-08-2570 Sequence 2, Applicati 8.68e-US-08-2570 Sequence 3, Applicati 8.68e-US-08-2570 Sequence 3, Applicati 8.68e-US-08-2570 Sequence 3, Applicati 8.68e-US-08-2570 Sequence 3, Applicati 8.68e-US-08-2570 Sequence 4, Applicati 8.68e-US-08-2570 Sequence 3, Applicat		455 455 199 167 124	,
Sequence 2, Applicati 1.28e- Sequence 25, Applicati 1.28e- Sequence 25, Applicati 1.15e- Sequence 27, Applicati 1.15e- Sequence 27, Applicati 1.15e- Sequence 27, Applicati 3.78e- Sequence 44, Applicati 3.78e- Sequence 50, Applicati 1.67e- Sequence 52, Applicati 1.67e- Sequence 36, Applicati 2.36e- Sequence 26, Applicati 2.36e- Sequence 27, Applicati 1.31e- Sequence 27, Applicati 1.31e- Sequence 28, Applicati 1.31e- Sequence 29, Applicati 1.31e- Sequence 4, Applicati 1.31e- Sequence 4, Applicati 1.31e- Sequence 4, Applicati 1.31e- Sequence 5, Applicati 1.31e- Sequence 6, Applicati 1.31e- Sequence 6, Applicati 1.31e- Sequence 7, Applicati 1.31e- Sequence 8, Applicati 1.31e- Sequence 2, Applicati 1.31e- Sequence 3, Applicati 1.31e- Se			!
2, Applicatio 1.28e- 25, Applicatio 1.28e- 26, Applicatio 1.15e- 27, Applicatio 1.15e- 28, Applicatio 1.15e- 29, Applicatio 3.78e- 20, Applicatio 1.67e- 21, Applicati 1.67e- 22, Applicati 2.30e- 23, Applicati 2.30e- 24, Applicati 1.31e- 25, Applicati 1.31e- 26, Applicati 3.06e- 27, Applicati 3.06e- 28, Applicati 3.06e- 29, Applicati 3.06e- 29, Applicati 3.06e- 20, Applicati 3.06e- 21, Applicati 3.06e- 22, Applicati 3.06e- 23, Applicati 3.06e- 24, Applicati 3.06e- 25, Applicati 3.06e- 26, Applicati 3.06e- 27, Applicati 3.06e- 28, Applicati 3.06e- 29, Applicati 3.06e- 29, Applicati 3.06e- 20, Applicati 3.06e- 21, Applicati 3.06e- 22, Applicati 3.06e- 23, Applicati 3.06e- 24, Applicati 3.06e- 25, Applicati 3.06e- 26, Applicati 3.06e- 27, Applicati 3.06e- 28, Applicati 3.06e- 29, Applicati 3.06e- 29, Applicati 3.06e- 20, Applicati 3.06e- 20, Applicati 3.06e- 21, Applicati 3.06e- 22, Applicati 3.06e- 23, Applicati 3.06e- 24, Applicati 3.06e- 25, Applicati 3.06e- 26, Applicati 3.06e- 27, Applicati 3.06e- 28, Applicati 3.06e- 29, Applicati 3.06e- 29, Applicati 3.06e- 20, Applicati 3.06e- 20, Applicati 3.06e- 20, Applicati 3.06e- 21, Applicati 3.06e- 21, Applicati 3.06e- 22, Applicati 3.06e- 23, Applicati 3.06e- 24, Applicati 3.06e- 25, Applicati 3.06e- 26, Applicati 3.06e- 27, Applicati 3.06e- 28, Applicati 3.06e- 29, Applicati 3.06e- 20,	01111 010111111	-050-	
2, Applicatio 1.28e- 25, Applicatio 1.28e- 26, Applicatio 1.15e- 27, Applicatio 1.15e- 28, Applicatio 1.15e- 29, Applicatio 3.78e- 20, Applicatio 1.67e- 21, Applicati 1.67e- 22, Applicati 2.30e- 23, Applicati 2.30e- 24, Applicati 1.31e- 25, Applicati 1.31e- 26, Applicati 3.06e- 27, Applicati 3.06e- 28, Applicati 3.06e- 29, Applicati 3.06e- 29, Applicati 3.06e- 20, Applicati 3.06e- 21, Applicati 3.06e- 22, Applicati 3.06e- 23, Applicati 3.06e- 24, Applicati 3.06e- 25, Applicati 3.06e- 26, Applicati 3.06e- 27, Applicati 3.06e- 28, Applicati 3.06e- 29, Applicati 3.06e- 29, Applicati 3.06e- 20, Applicati 3.06e- 21, Applicati 3.06e- 22, Applicati 3.06e- 23, Applicati 3.06e- 24, Applicati 3.06e- 25, Applicati 3.06e- 26, Applicati 3.06e- 27, Applicati 3.06e- 28, Applicati 3.06e- 29, Applicati 3.06e- 29, Applicati 3.06e- 20, Applicati 3.06e- 20, Applicati 3.06e- 21, Applicati 3.06e- 22, Applicati 3.06e- 23, Applicati 3.06e- 24, Applicati 3.06e- 25, Applicati 3.06e- 26, Applicati 3.06e- 27, Applicati 3.06e- 28, Applicati 3.06e- 29, Applicati 3.06e- 29, Applicati 3.06e- 20, Applicati 3.06e- 20, Applicati 3.06e- 20, Applicati 3.06e- 21, Applicati 3.06e- 21, Applicati 3.06e- 22, Applicati 3.06e- 23, Applicati 3.06e- 24, Applicati 3.06e- 25, Applicati 3.06e- 26, Applicati 3.06e- 27, Applicati 3.06e- 28, Applicati 3.06e- 29, Applicati 3.06e- 20,	sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence	sequence sequence sequence sequence sequence	Descript
Pred. N  atio 1.28e coati 1.05e atio 1.15e atio 1.15e atio 1.15e coati 6.45e coati 1.67e coati 1.67e coati 2.30e coati 2.30e coati 3.12e atio 3.06e atio 3.12e atio 8.68e atio 8.68e	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 4 5 7 7 8 5 7 7	ion
	pplicati pplicati pplicati pplicati pplicati pplicatio plicatio	olicatio pplicati pplicati pplicatio plicatio pplicatio	

3888888888888888888888888888888888888	XX DE XX	<b>.</b>	a A S	RES	
Page	Sequ	01-J	xxxxx	SULT US-C	22222222222222222222222222222222222222
bequence 2, A atent No. 56 GENERAL INCO APPLICANT: CORRESPOND APPLICANT: COUNTRY: ZIP: 200 COMPUTER R MEDIUM T COMPUTER R MEDIUM T COMPUTER R MEDIUM T COMPUTER R APPLICAT APPLICAT FILING D CLASSIII APPLICAT FILING D APPLICAT APPLICAT APPLICAT FILING D APPLICAT A	equence 2	1-JAN-1900	×	1 08-321-	181 181 181 180 180 180 180 180 180 180
RAPELL S. C.	, Applic	0		668-2	777888888888999999999999999999999999999
Ication US/0832166: UTION: UTION: WALLACH, David RAKEBUSCH, Cord RAFFOLOMEEV, Eugene ATKIN, Michael NUTION: THE THE REI PROWDY AND NEIMAR! PSE ADDRESS: BROWDY AND NEIMAR! PSE ADDRESS: SIFIPPPY disk ISH FC compatible PSTEM: PC-DOS/MS-1 PATENTION DATA: UNUMBER: US/08/32: 11-OCT-1994 VION: 435 VION	ication			STA	3333 34461 3461 3461 3461 3461 3461 3461
on US/08321  H, David USCH, Cord OMEEV, Euge , Michael : MOLECULE : TE TNF S: 42 POY AND NEIM DAY AND NEIM DAY AND NEIM FORM:	o/sn			STANDARD;	
B 32 COT d COT d COT d E u q COT d C	/083216				PCT-US.34-0 PCT-US.95-0 US-08-188-0 US-08-385-0 US-08-23-0 US-08-23-0 US-08-23-0 US-08-23-0 US-08-453-0 US-08-453-0 US-08-187-0 US-08-187-
121663 d igene igene ILES INFLU IF RECEPTO IMARX et, N.W., ble ble ble ble ble 07268 07268 07268	68			PRT;	7 00000004400000004100000
13 Ve s REN				45	Sequence
CING T, THEI				5 AA	
## 00 R P!					44480 H4HHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH
REPARATION					Applicatio Applicatio Applicatio Applicatio Applicatio Applicatio Applicatio Applicati
AND THEIR					1.31e-07 1.31e-07 1.31e-07 1.31e-07 1.61e-07 1.61e-07 1.61e-07 1.61e-07 1.61e-07 1.53e-06 2.30e-06 2.30e-06 2.30e-06 3.46e-06 9.51e-06 9.51e-06 9.51e-06 9.51e-06 2.13e-05

USE

```
8888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 56.4%;
Best Local Similarity 99.3%;
                                                 ATTORNEY/AGENT INFORMATION:
NAME: RObbins, Roberta L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEPAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 25:
SEQUENCE CHARACTERISTICS:
LENGTH: 455 amino acids
      SEQUENCE
                                                                                                                                                                  COMPUTER: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTMARE: Patentin Release #1.0, version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 435
ATTORNEY/AGERUM 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-050-319B-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 25, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     XXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101 SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        161 KONTYCTCHAGFFLRENECVSCS 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 25, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              143 KONTYCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 455 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                               APPLICANT: M.Feldmanu, F.M. Brennan
APPLICANT: M.J.C. Turner, F.M. Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Mecrosis Factor alpha) Receptor
TITLE OF SEQUENCES: 57
TOPOLOGY: linear
MOLECULE TYPE: protein
JENCE 455 AA; 50579 MW; 1048388 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: protein
JENCE 455 AA; 50494 MW; 1048031 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                    TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                       STREET: 635 Brya
CITY: Palo Alto
STATE: Californ:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                142;
                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                        California
                                                                                                                                                                                                                                                                                                                                              635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 455 amino acids
                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                            Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1124; DB 7; Length 455
Pred. No. 1.28e-100;
1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                  Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 48, Application US/08050319B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-050-319B-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 48, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101 SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      143 KONTVCTCHAGFFLRENECVSCA 165
41 DSVCPTGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             161 KONTYCTCHAGFFLRENECVSCS 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83 SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23 DSYCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match 56.4%; Local Similarity 99.3%;
                                                                                                                                                                   TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: '
                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: FORM PC COMPATION
COMPUTER: PATENTIN PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version #1.25
CURENT APPLICATION DATA:
APPLICATION BATA:
APPLICATION UMBER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 435
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                     STREET: OJCITY: Palo Alto
CITY: Palo Alto
CTATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human INFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Recepto:
                                                                                                     MOLECULE TYPE:
                                                                                                                                                                                           TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: Reed & Robbins
                                                                                                                                                       SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 w
                                                                                                                 LENGTH: 199 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                      NAME: Robbins, Roberta L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            142;
                                                  Similarity
                                                                                       LE TYPE: protein
199 AA; 22186 MW; 195553 CN;
                                                                                                                                                                                                                                                                                                                                                                                             94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                            635 Bryant Street
                                                  98.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 1124; DB 7;
Pred. No. 1.28e-100;
                                                  Score 1115; DB 7; Pred. No. 1.05e-99;
                                                                                                                                                                                                                         5150-0030
                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₹
                                                              Length 199;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

Š

23

DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL

ş

밁

Ş 밁

```
Query Match
Best Local S
Matches 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-050-319B-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 2, Application US/08050319B
                                                                                                                                                                                                                                           SEQUENCE
 143
                                                                                        101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               161 KONTYCTCHAGFFLRENECVSCS 183
                              161 KQNTVCT 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143 KONTYCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101 SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               83
                                                            83
                                                                                                                     23
                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                  TELEFAX: (415) 327-323: INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
NAME: ROBBIAS, ROBERTA L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: M.Feldmann, P.W. Gray, APPLICANT: M.J.C. Turner, F.M Brennan
                                                                                                                                                                                                                                                      MOLECULE
                                                                          SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
KQNTVCT 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                          SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08/050,319B FILING DATE: 10-May-1993 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                    TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                               TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                             49.9%;
1 Similarity 100.0%;
127; Conservative
                                                                                                                                                                                                                                                                                                       LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2, Application US/08050319B
o. 5633145
                                                                                                                                                                                                                                          LE TYPE:
167 AA;
                                                                                                                                                                                                                                                                                                 167 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                : (415) 617-8999
(415) 327-3231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Reed & Robbins
                                                                                                                                                                                                                                          protein
18626 MW; 139513 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                             Score 996; DB 7; Lo
Pred. No. 1.15e-87;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                    2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       167 AA
                                                                                                                                                                                                            Length 167
                                                                                                                                                                               Indels
                                                                                                                                                                               0
                                                                                                                                                                             0
                                                                                                                                            - 명
                                                                                                                   Ş
                                                                                                                                                                                                          ₽
                                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                  Query Match
01-JAN-1900
                                                        US-08-050-319B-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-050-319B-57
                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 57, Application US/08050319B
                                                                                                                     143
                                                                                                                                               161 KQNTVCT 167
                                                                                                                                                                                            101 SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patent No. 5633145
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 57,
                                                                                                                                                                                                                                                                                                 / Match 49.9%;
Local Similarity 100.0%;
hes 127; Conservative
                                                                                                                                                                             83
                                                                                                                                                                                                                                        23
                                                                                                                                                                                                                                                        41 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (415) 327-32 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617.8999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Robbins, Roberta L
                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 167 amino acids
                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                   KQNTVCT 149
                                                                                                                                                                             SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                          DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                             TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/0 FILING DATE: 10-May-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZIP: 94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                LE TYPE: protein
167 AA; 18626 MW; 139513 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Reed & Robbins
                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          327-3231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08/050,319B
                                                                                                                                                                                                                                                                                                   Score 996; DB 7; Lo
Pred. No. 1.15e-87;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ۲
                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                        124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             167
                                                        ž
                                                                                                                                                                                                                                                                                                                                  Length 167;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                      Indels
```

0

Gaps

밁 Ş 밁 Ş ğ

ş

Sequence

```
Sequence 50, Application US/08050319B
                                                                                                                                                                                                              01-JAN-1900
                                                                                                                                                                                                                                                                                                  US-08-050-319B-50
    Sequence 50, Application US/08050319B
Patent No. 5633145
GENERAL INFORMATION:
APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 4, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                        145 NTVC 148
                                                                                                                                                                                                                                                                                                                                                                                                                                 121 NTVC 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  y Match 49.2%;
Local Similarity 100.0%;
hes 124; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        85 SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/05/08/05/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08/05/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQ 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (415) 327-3231 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 94301
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: protein
JENCE 124 AA; 14047 MW; 75840 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 124 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PATENTIN Release #1.0, version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4, Application US/08050319B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E: Reed & Robbins
635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/050,319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 981; DB 7;
Pred. No. 3.78e-86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5150-0030
                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                  157 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 510-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEPAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 50:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TELEGTH: 157 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 54, Application US/08050319B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-050-319B-54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 54, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60 DTDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQXRHYWS 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      36 DREKRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWS 95
                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                      STREET: COLUMN TRANSPORTE: California
                                                                                                                                                                                                                                         APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: protein
JENCE 157 AA; 17570 MW; 122247 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Patentin Release #1.0, version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Floppy
                                                                                                                                                                                                   NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: Robbins, Roberta L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: Necrosis Factor alpha) Receptor NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 635 Brya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                      ZIP: 94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/050,319B FILING DATE: 10-May-1993
                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ch 40.1%;
1 Similarity 96.2%;
102; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               California
                                                                                                                                                          635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                   Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 800; DB 7; Louis Pred. No. 6.45e-68; 2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
```

0

Gaps

0

IRESULT US

XXXXX

S 밁 Š В ş 용

Query Match Best Local S Matches 12

SEQUENCE

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 54:
SEQUENCE CHARACTERISTICS:
LENGTH: 158 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE 158 AA; 17375 MW; 124033 CN;
                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 52, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-050-319B-52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                    Sequence 52, Application US/08050319B Patent No. 5633145 GENERAL INFORMATION:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PACENTIN Release #1.0, version #1.
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-May-193
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: ROBBINS, ROBERTA L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101 SCSKCRKEMGQVEISSCTVDRDTVCTCH 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        y Match 33.4%;
Local Similarity 97.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
REFERENCE/DOCKET NUMBER: 5150-0030
REFERENCE/DOCKET NUMBER: 517-0030
REFERENCE/DOCKET NUMBER: 33,208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-May-1993
CIACTELE TOWN.
                                                                                                                                                                     COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                 APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: RObbins, Roberta L
                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SCSKCRKEMGQVEISSCTVDRDTVCGCR 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                   STREET: 635 Bryant CITY: Palo Alto STATE: California
                                                                                                                                                                                               ZIP: 94301
                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                635 Bryant Street
                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                             Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 666; DB 7;
Pred. No. 1.67e-54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       153 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ននននននន
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-050-319B-36
   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 36, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                        SOFTWARE: Patentin Release #1.0, version #1.25
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 4.35
ATTORNEY/AGENT INFORMATION:
NAME: ROBDINS, ROBERTA L.
REGISTRATION NUMBER: 33.208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 36, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: 52:
SEQUENCE CHARACTERISTICS:
LENGTH: 153 and no acids
TYPE: amino acid
TYPE: amino acid
TOPOLOGY: Linear
MOLECULE TYPE: protein
EQUENCE 153 AA; 17148 MW; 116104 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  / Match 23.9%;
Local Similarity 66.0%;
nes 66; Conservative
                                                                                    TELEFAX: (415) 327-3231 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  66 CESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQC 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            44 CPQGKYIHPQNN-SIC--CTKCHK--GTYLYNDCPGPGQDT-DCRKNQYRHYWSENLFQC 97
           LENGTH: 41 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Recepton
NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 41 amino acids
                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: Reed & Robbins
                                                                                                                                                                                                                                                                                                                            CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                     ZIP: 94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION:
LE TYPE: peptide 41 AA; 4856 MW; 8
                                                                                                                                                                                                                                                                                                                                                    635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (415) 327-3231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
  8601 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 477; DB 7;
Pred. No. 8.82e-36;
9; Mismatches 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6;
```

Query Match 17.0%; Best Local Similarity 100.0%;

Score 339; DB 7; Pred. No. 2.30e-22;

Length

```
RESULT
                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: ROBBINS, ROBERTA L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEPAX: (415) 617-8999
TELEPAX: (415) 617-8999
TELEPAX: (415) 617-8999
TELEPAX: (415) 617-8291
INFORMATION FOR SEO ID NO: 26:
SEQUENCE CHARACTERISTICS:
LENGTH: 40 amino acids
                                                                                                                                                                                                            TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE 40 AA; 4459 MW; 7536 CN;
Sequence 31, Application US/08050319B
                         01-JAN-1900
                                                XXXXXX
                                                                      US-08-050-319B-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 26, Application US/08050319B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-050-319B-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PATENT NO. 5633145

GENERAL INFORMATION:
APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       108 GCRKNOYRHYWSENLFOCFNCSLCLNGTVHLSCQEKONTVC 148
                                                                                                                Match 16.2%;
Local Similarity 100.0%;
les 40; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Н
                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQNTVC 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Palo Alto
: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5, Application US/08050319B
5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                     STANDARD;
                                                                                                                                                              Score 324; DB 7; Le Pred. No. 6.30e-21; 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                     43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6
                                                                     ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                      Length 40;
                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                               ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                               Gaps
                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
ş
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                        Query Match 15.9%; Score 318; DB 7; Best Local Similarity 100.0%; Pred. No. 2.36e-20, Matches 43; Conservative 0; Mismatches (
                                                                                                                                                                                                                                              US-08-292-549-2
                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                         Sequence 2, Application US/08292549
                                                                                                                                                                                                01-JAN-1900
                                                                                                                                                                                                                        XXXXXX
                                                                           Sequence 2, Application US/08292549
Patent No. 5464938
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Smith, Craig A.
APPLICANT: Goodwin, Raymond G.
TITLE OF INVENTION: Isolated Viral Protein
NUMBER OF SEQUENCES: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 31, Application US/08050319B Patent No. 5633145 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                             65 ECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVC 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (415) 327-3231 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                         1 ECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVC 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 94301
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 43 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: ROBBINS, ROBERTS, 13,208
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: Immunex C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                    STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/08/050,319B FILING DATE: 10-May-1993 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PatentIn Release #1.0
                                           STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE:
         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                        LE TYPE: protein
43 AA; 4767 MW; 9758 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               I: 635 Bryant Street
Palo Alto
California
                               Seattle
                   Washington
                                         51 University Street
                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Reed & Robbins
                                                        Immunex Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Floppy disk
                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Release #1.0,
                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               version
                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                              Length 43
                                                                                        TNF Antagonists
```

0;

Gaps

0

Ş 문

```
ş
                                                                                                                                                                                                                                                                                                                                                                                                                                       닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: protein SEQUENCE 325 AA; 35132 MW; 591446 CN;
                                                                                                                                                                                                                                                                                            Sequence 2, Application PC/TUS9102207.
                                                                                                                                                                                                                                                                                                                    01-JAN-1900
                                                                                                                                                                                                                                                                                                                                           XXXXX
                                                                                                                                                                                                                                                                                                                                                                 PCT-US91-02207-2
                                                                                                                                                                                                                                                          Sequence 2, Application PC/TUS9102207 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 325 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                62 SPCEDGTFTASTNHAPACVSCRGPCTGHLSESQ--PCDRTHDRVCNCSTGNY 111
                     COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTMARE: Patentin Release #1.24
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US91/02207
FILING DATE: 19910329
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                             64 RECESGSFTASENHLRHCLSC-SKCRKEMGQVEISSCTVDRDTVCGCRKNQY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 LIAL-LYCVYYYYGDDVPYSSNQGKCGGHDYEKDGLCCASCHPGFYASRLC-GPGSNTVC 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                           6 LLAFGLLCLPWLQEGSADSVCPQGKYI-HP-QNNSICCTKCHKGTYLYNDCPGPGQDTDC
                                                                                               ZIP: 98101
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION UNMBER: 07/9.
FILING DATE: 10/19/92
ATTORNEY/AGENT INFORMATION:
ANAME.
                                                                                                                                                                                           APPLICANT: Smith, Craig A.
APPLICANT: Goodwin, Raymond G.
TITLE OF INVENTION: Isolated Viral Protein Cytokine Antagonists
NUMBER OF SEQUENCES: 4
CORRESSPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: Perkins, Patricia A.
REGISTRATION NUMBER: 34,638
REFERENCE/DOCKET NUMBER: 266
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Patentin Release #1.0, Version #1 CURRENT APPLICATION DATA:
ATTORNEY/AGENT INFORMATION:
NAME: Wight, Christopher L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE:
                                                                                                                                                                          STREET:
                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
39; Conser
                                                                                                                                                               Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                  Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  325 amino acids
                                                                                                                                                                         E: Immunex Corporation
51 University Street
                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (206)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (206)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Floppy disk
                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      233-0644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                587-0430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/08/292,549
                                              PCT/US91/02207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               07/963,330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 225; DB 5;
Pred. No. 1.31e-11;
21; Mismatches 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2602-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches 45; Indels
                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                325
                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                           63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
```

```
RESULT
ID US
XX
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 4, Application US/08292549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-292-549-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             xxxxx
                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 4, Application US/08292549 Patent No. 5464938 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11.3%;
Local Similarity 34.8%;
tes 39; Conservation
                            TELEFAX: (206) 233-064
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (206) 587-060
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 64 RECESGSFTASENHLRHCLSC-SKCRKEMGQVEISSCTVDRDTVCGCRKNQY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62 SPCEDGTFTASTNHAPACVSCRGPCTGHLSESQ--PCDRTHDRVCNCSTGNY 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 LIAL-LVCVVYVYGDDVPYSSNQGKCGGHDYEKDGLCCASCHPGFYASRLC-GPGSNTVC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6 LLAFGLLCLPWLQEGSADSVCPQGKYI-HP-QNNSICCTKCHKGTYLYNDCPGPGQDTDC
                                                                                                                                                                                                                                                                                                                                      APPLICANT: Smith, Craig A.
APPLICANT: Goodwin, Raymond G.
TITLE OF INVENTION: Isolated Viral Protein TNF Antagonists
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: 26
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 587-0430
                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                            NAME: Perkins, Patricia A.
REGISTRATION NUMBER: 34,638
REFERENCE/DOCKET NUMBER: 266
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 587-04430
                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/9
FILING DATE: 10/19/92
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                     SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: AM TOPOLOGY:
                                                                                                                                                                    FILING DATE:
CLASSIFICATION: 530
                                                                                                                                                                                                                            COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                            STREET: 51 Uni
                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                STATE: Washington
                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER:
                 LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LE TYPE: protein
325 AA; 35132 MW; 591446 CN;
                                                                                                                                                                                                                                                                          9810:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      H: 325 amino acids
AMINO ACID
          amino acid
                                                                                                                                                                                                                                                                                                                 51 University Street
                     326 amino acids
                                                                                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                 Immunex Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6) 50,
587-0606
1 587-0606
                                                      233-0644
                                                                                                                                              07/963,330
                                                                                                                                                                                            us/08/292,549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 225; DB 10;
Pred. No. 1.31e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31,680
                                          4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2602
                                                                                      2602-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                  Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 325;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               53
```

*****	
***************************************	
*****	
*******	
******	
****	
******	(TM)

Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_nn n.a. - n.a. database search, using Smith-Waterman algorithm

Run on: Wed May 6 10:00:45 1998; MasPar time 59.61 Seconds 927.602 Million cell updates/sec

Tabular output not generated.

Description:
Perfect Score:
N.A. Sequence:
Comp: >US-08-804-166-1 (1-1049) from US08804166.seq 1049

1 TCCACATGGCTACAGGTAAG......TTATTATCACAAATCTTAAG 1049
AGGTGTACCGATGTCCATTC.....ATAATAGTGTTTTAGAATTC

Scoring table: TABLE default Gap 6

Nmatch

STD:

Dbase 0; Query 0

Searched: 102136 seqs, 26354296 bases x 2

Post-processing: Minimum Match 0% Listing first 45 summaries

Database:

n-issued 1:backl 2:51 3:52 4:53 5:54 6:55 7:56 8:57 9:PCT90 10:PCT91 11:PCT92 12:PCT93 13:PCT94 14:PCT95 15:PCT96

Statistics:

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Mean 8.672; Variance 4.371; scale 1.984

### SUMMARIES

	<b>.</b> .																		Result	
6	œ	.7	6	·						φ.		7	0		4		٨	-	"	
59	59	59	69	69	169	255	298	298	300	302	370	379	381	420	424	424	424	424	Score	
5.6	5.6	5.6	6.6	o.	16.1	24.3	28.4	28.4	28.6	28.8	35.3	36.1	36.3	40.0	40.4	40.4	40.4	40.4	Query	P
597	321	321	654	534	462	477	4283	4283	2771	474	372	501	504	600	6889	6889	2175	2062	Length	
σ	σ	4	σ	σ	7	7	7	7	7	7	7	7	7	7	14	σ	7	7	BG	
us-08-187-	US-08-314-	US-07-920-	US-08-187-	US-08-187-	US-08-050-	US-08-050-	US-08-445-	US-08-343-	US-08-273-	US-08-050-	US-08-050-	US-08-050-	US-08-050-	US-08-050-	PCT-US95-0	US-08-286-	US-08-321-	US-08-050-	Ü	
Sequence 2,	Sequence 23	Sequence 2	Sequence 1	Sequence 3	Sequence 5	Sequence 53	Sequence 1	Sequence 3	Sequence 5	Sequence 49	Sequence 3	Sequence 1	Sequence 5	Sequence 4	Sequence 2	Sequence 2	Sequence 1	Sequence 2	Description	
, Applicatio	<ol> <li>Applicati</li> </ol>	<ol> <li>Applicati</li> </ol>	, Applicatio	, Applicatio	<ol> <li>Applicati</li> </ol>	•	, Applicatio	, Applicatio	, Applicatio	٠.	, Applicatio	, Applicatio	6, Applicati	7, Applicati	, Applicatio	, Applicatio	, Applicatio	4, Applicati		
3.06e-26	3.06e-26	3.06e-26	9.14e-34	9.14e-34	1.18e-113	7.22e-185	8.01e-221	8.01e-221	1.69e-222	3.55e-224	2.44e-281	6.34e-289	1.31e-290	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	Pred. No.	

•	•
***####8888888888888888888888888888888	TD C C C C C C C C C C C C C C C C C C C
XXXXXX  O1-JAN-1  Sequence Sequence Sequence Patent N  APPLI CORRE ADD STA COMPU MED COMPU MED COMPU STA COMPU MED COMPU AMA ANTORRE APPL APPL TELEC T	20 21 22 22 22 22 22 22 22 22 23 24 24 24 25 33 34 44 44 44 44 45 45 46 46 47 47 48 48 48 48 48 48 48 48 48 48 48 48 48
1900  24  24  26  27  27  28  29  20  20  20  20  20  20  20  20  20	0 222223333333333333555557 5 44455566903466666682222
Appl Appl Appl Appl Appl Appl Appl Appl	3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
plication US/0 m. Feldmann, P. m. J.C. Turner, control Necro QUENCES: 5 Reed & Robbi 35 Bryant Stre altonia USA 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7218 7 2248 7 2248 7 2248 6 4810 1 4810 1 4810 1 4810 1 4810 1 5125 1 5125 1 5125 7 5125 7 7215 6 7215 6 72
/080503 /080503 /080503 /080503 /080503 /080508 /08050	7 US-08-232- 7 US-08-475- 7 US-08-780- 7 US-08-38- 7 US-08-38- 6 US-08-38- 7 US-08-18- 7 US-08-18- 7 US-08-18- 7 US-08-18- 7 US-08-18- 7 US-08-18- 7 US-08-23- 7 PCT-US93-0 9 PCT-US93-0 105-08-238- 7 US-08-238- 7 U
50319B. 50319B 50319B Gray, M Brennan M Brennan TNFalpha s Factor alpha) s Factor alpha) c #1.0, version /050,319B /050,319B	2- Sequence 5- Sequence 6- Sequence 9- Sequence 9- Sequence 8- Sequence 8- Sequence 1- Sequence 1- Sequence 2- Sequence 1- Sequence 2- Sequence 2- Sequence 3- Sequence 1- Sequence
) Receptor	9114824, 44
Ħ '	Application Applic
	9.29e-25 4.33e-21 4.33e-21 4.33e-21 4.33e-21 7.43e-10 7.4

```
X4XEXEX8333333333333333333
                                                                                                                                                                                                                                     RESULT
ID US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     888888888
                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 40.4%;
Best Local Similarity 99.8%;
Matches 425; Conservative
                                                                                                                          Sequence 1,
Patent No.
GENERAL II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: CDS
LOCATION: 155..1519
Sequence 2062 BP; 429 A; 617 C;
                                                                                                                                                                                                                                    US-08-321-668-1 STANDARD; DNA; UNC; 2175 BP
                                                                                                                                                                 Sequence 1, Application US/08321668
                                                                                                                                                                                     01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     644
                                                                                                                                                                                                                                                                                                                                                                                                584
                                                                                                                                                                                                                                                                                                                                                                                                                 515
                                                                                                                                                                                                                                                                                                                                                                                                                                    524
                                                                                                                                                                                                                                                                                                                                                                                                                                                        455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               395
                                                                                                                                                                                                                                                                            764
                                                                                                                                                                                                                                                                                                                  704
                              APPLICANT: WALLACH, David
APPLICANT: WAREDUSCH, COID
APPLICANT: VARPOLOMEEV, Eugene
APPLICANT: VARPOLOMEEV, Eugene
APPLICANT: BATKIN, MIChael
TITLE OF INVENTION: MOLECULES INFLUENCING THE SHEDDING OF
TITLE OF INVENTION: THE THE RECEPTORS, THEIR PREPARATION AND
NUMBER OF SEQUENCES: 42
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: CDNA to mRNA FEATURE:
                                                                                                                                                                                                                                                                            TCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                     CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
       CITY: Washington STATE: D.C.
                                                                                                                                                                                                                                                                                             TCCTGT 700
                                                                                                                                                                                                                                                                                                                CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                              1,
                                                                                                                          INFORMATION:
                                                                                                                                     Application US/08321668
5665859
                                                                                                                                                                                                                                                                            769
                         E: BROWDY AND NEIMARK
419 Seventh Street, N.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2062 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 424; DB 7; Le
Pred. No. 0.00e+00;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  573 G; 443 T; 0 other;
                          Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 2062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                THEIR
                                                                                                                                                                                                                                                                                                                                                      703
                                                                                                                                                                                                                                                                                                                                                                         634
                                                                                                                                                                                                                                                                                                                                                                                             643
                                                                                                                                                                                                                                                                                                                                                                                                                574
                                                                                                                                                                                                                                                                                                                                                                                                                                                      514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             454
                                                                                                                                                                                                                                                                                                                                                                                                                                   583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                USE
```

ľ.

RESULT 3 ID US-08-286-740-2 STANDARD;

DNA;

```
S
                        밁
                                             Š
                                                                     밁
                                                                                           Ş
                                                                                                                     밁
                                                                                                                                         Qy
                                                                                                                                                                   밁
                                                                                                                                                                                         Š
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                몽
                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                   Query Match 40.4%;
Best Local Similarity 99.8%;
Matches 425; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: WALL
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-638-5197
TELEFAX: 202-737-3528
TELEX: 248633
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: CDS
LOCATION: 256..1620
Sequence 2175 BP; 474 A;
                                                                                                                                                                                                                                                                                                                                     616
                                                                                                                                                                                                                                           464
                                                                                                                                                                                                                                                                   496
                                                                                                                                                                                                                                                                                         404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/321
FILING DATE: 12-OCT-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: IL 107268
FILING DATE: 12-OCT-1993
ATTORNEY/AGENT INFORMATION:
NAME: BROWDY, ROGET L.
REGISTRATION NUMBER: 25,618
  764
                       796
                                                704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: lir
MOLECULE TYPE:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 20004
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
TCCTGT
                                                           TICCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                         CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                       AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                         TGCAGGGAGTGTGAGAGAGCGGCTTCACCGCTTCAGAAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                        AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                      AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGGCCGGGGCAGGATACGGAC
                        TCCTGT
                                                                                                                                                                                                                                          TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 2175 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                             CGGGACACCGTGTGGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                            AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                       801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                     641 C; 604 G; 456 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08/321,668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IL 107268
                                                                                                                                                                                                                                                                                                                                                                                   Score 424; DB 7; 1
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WALLACH-13
                                                                                                                                                                                                                                                                                                                                                                                                                                  0 other
                                                                                                                                                                                                                                                                                                                                                                                     1;
                                                                                                                                                                                                                                                                                                                                                                                                          Length 2175;
                                                                                                                                                                                                                                                                                                                                                                                     Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                     795
                                                                                                                                                                     675
                                                                                                                                                                                            583
                                                                                                                                                                                                                    615
                                                                                                                                                                                                                                          523
                                                                                                                                                                                                                                                                 555
                                                                                                                                                                                                                                                                                         463
                                                                                                                                                                                                                                                                                                                495
                                                                                                                                                                                                                                                                                                                                      403
                                                                                                                                                                                                                                                                                                                                                              435
                                                                                             703
                                                                                                                     735
                                                                                                                                            643
```

XXXXXX

```
õ
Ş
                     밁
                                        Ş
                                                               밁
                                                                                 δÃ
                                                                                                          밁
                                                                                                                              S
                                                                                                                                                    밁
                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                   Query Match
Best Local S
                                                                                                                                                                                                                      Matches
                                                                                                                                                                        TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-1994
TELEFAX: 415/952-9881
TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                         1785 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 1844
                                                                                                                                                                                                                                                           STRANDEDNESS: double
TOPOLOGY: linear
Sequence 6889 BP; 1729 A; 1826 C; 1681 G; 1653 T; 0 other;
                                                                                                           1845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 2, Application US/08286740 Patent No. 5561053
                    1965 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 2, Application US/08286740.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JAN-1900
                                                                                     464
                                                                                                                                404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                              40.48;
Local Similarity 99.88;
les 425; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/0
FILING DATE: 05-AUG-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech,
                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: Lee, Wendy M.
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION:
CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                        AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                   TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 1904
                                                                                                                              AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                             LENGTH: 6889 bases
                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94080
                                                                                                                                                                                                                                                                                                 nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  460 Point San Bruno Blvd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Crowley,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craig W. METHOD FOR SELECTING HIGH-EXPRESSING HOST CELLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/08/286,740
                                                                                                                                                                                                                    Score 424; DB 6;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360 Kb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              floppy
                                                                                                                                                                                                                     1;
                                                                                                                                                                                                                                           Length 6889;
                                                                                                                                                                                                                     Indels 0;
                                                                                                                                                                                                                     Gaps
                     2024
                                                              1964
                                                                                    523
                                                                                                                              463
643
                                          583
                                                                                                                                                                                                                     0
```

```
RESULT
ID P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                  õ
                                     밁
                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 臣
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
밁
                                                                Query Match
Best Local S
                                                         Matches
                 Sequence 2, Application PC/TUS9509576 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PCT-US95-09576-2 STANDARD; DNA; UNC; 6889 BP.
1785 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 1844
                                                                                           Sequence 6889 BP; 1729 A; 1826 C; 1681 G; 1653 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 2, Application PC/TUS9509576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    704
                                                                                                                                           TELEFAX: 415/952-9881
TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               764
                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/28
FILING DATE: 05-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Lee, Wendy M.
                                                                                                                                                                                                                                                                                                                                                                  venentech, Inc.
UKKET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
COUNTRY: USA
                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOTWARE: patin (Genericch) CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM: MEDIUM TYPE: 5.25 inch,
                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech,
                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                       TELEFAX: 415/252-1994
TELEFAX: 415/952-9881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCTGT 2150
                                                                                                      TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCTGT 769
                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                             REGISTRATION NUMBER: 00,000
                                                                                                                                                                                                                                                                          CLASSIFICATION:
                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                 LENGTH: 6889 bases
                                                    40.4%;
1 Similarity 99.8%;
425; Conservation
                                                                                                                                                                                                                                                                                                                                                                94080
                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENENTECH,
                                                                                                                                                                                                                                                                                                                                                                                                                                           METHOD FOR SELECTING HIGH-EXPRESSING HOST CELLS
                                                                                                                                                                                                                                                       08/286740
                                                                                                                                                                                                                                                                                             PCT/US95/09576
                                                      Score 424; DB 14;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                           360 Kb floppy disk
                                                                                                                                                                                                      798PCT
                                                                          Length 6889;
                                                         Indels
                                                       0
                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          703
                                                         0
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮻
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ş
                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                             COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: ROBDINS, ROBERTA L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                                                                                              2145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1905
                                                                                                                                                                                                                                                                                           Sequence 47, Applicat Patent No. 5633145 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                              Sequence 47, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                 XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                           US-08-050-319B-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1845
                TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 600 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            404
                                                                                                                                                                                                                                                                                                                                                                                                                             764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       524
                                                                                                                                                                                   ADDRESSEE: Reed & Robbins
STREET: 635 Bryant Street
CITY: Palo Alto
STATE: Callfornia
COUNTRY: USA
ZIP: 94301
                                                                                                                                                                                                                                   APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAACAGAACACCGTGTGCACCTGCCATGCAGGTTTCTTCTAAGAGAAAACGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCTGT 2150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT 2024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC 1964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCTGT 769
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ANACAGNACACCGTGTGCACCTGCCATGCAGGTTTTCTTAAGAGAAAACGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 1904
nucleic acid
                                                                                                                                                                                                                                                                                                             Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                         STANDARD; DNA; UNC; 600 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           463
                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                              γ
                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               នននននន
      S
                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                           704
                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                584
                                                                                                                                                                                                                                                                                                                                                                                                                  524
                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                     464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                              σ
```

```
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: cDNA to mR
FEATURE:
FEATURE: CDS
INCATION: 1..597
Sequence 600 BP; 148 A; 157 C
                                                                                                                                                                                                                                                                        Sequence 56, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                  Sequence 56, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-050-319B-56 STANDARD; DNA; UNC;
                                                                                                                     GENERAL INFORMATION:
APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) ReceptonumBer of Sequences: 57
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         404 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         344 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATATATTCCATTTGCTGTTACC 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GATAGTGTGTGTCCCACAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match 40.0%;
Local Similarity 99.3%;
Les 423; Conservative
                                    ADDRESSEE: Reed & 1
STREET: 635 Bryant
CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
ZIP: 94:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCTGT 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCAGGGAGTGTGAGAGCGGCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCAGGGAGTGTGAGAGAGCGGCTTCACCGCTTCAGAAAAACCACCTCAGACACATGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
94301
                                                                                635 Bryant Street
                     USA
                                                                                                        Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 420; DB 7;
Pred. No. 0.00e+00;
0; Mismatches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; 162 G; 133 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 600;
                                                                                                                                                                    Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
88888888888888888888888888888888888
    S
                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                      뮹
                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                     용
                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                          Ħ
                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local !
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                Sequence 1, Appite No. 5633145
  PATENT NO. 5633145
GENERAL INFORMATION:
APPLICANT: M.Feldmann, P.V.
APPLICANT: M.J.C. Turner,
                                                                                                                                                          US-08-050-319B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 504 BP; 122 A; 137
                                                                        Sequence 1, Application
                                                                                                 01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             344
                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                               464
                                                                                                                                                                                                                                                                                                                                                                                                                                              404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTGTACC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-899
TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 56:
                                                                                                                                                                                                       704
                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/
FILING DATE: 10-May-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 504 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                           TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC 403
                                                                                                                                                                                                                                                             TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                      AAACAGAACACCGTGTGCACCTG 503
                                                                                                                                                                                                                                                    TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                            CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                            AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          382;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         similarity 99.7%;
382; Conservative
                                                 Application
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Robbins, Roberta L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
1..501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                        STANDARD; DNA; UNC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA to mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             double
                                                 US/08050319B
                                                                        US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Release #1.0, version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/08/050,319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 381; DB 7; L
Pred. No. 1.31e-290;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C; 138 G; 107 T; 0 other;
                                                                                                                                                                                                       726
    ቹ
.
  Brennan
                                                                                                                                                        ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 504;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                643
                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                               583
                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                              523
                                                                                                                                                                                                                                                                                                                                                                                                                                          463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
  RESULT
ID U
                                                                                                                                                                                       Ş
                                                                                         δÃ
                                                                                                                   밁
                                                                                                                                        Š
                                                                                                                                                                 밁
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: ROBBITS, Roberta L.
REGISTRATION UNMBER: 33.208
REFERENCE/DOCKET NUMBER: 5150
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEFAX: (415) 327-3331
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 501 base pairs
TYPE: nucleic acid
CTEARMATENAMES: 40-101
                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION: 1..501
Sequence 501 BP; 121 A; 137 C; 137 G; 106 T; 0 other;
US-08-050-319B-3 STANDARD; DNA; UNC;
                                                                                                                                                                                                                                                                                                                                               121 GATAGTGTGTGCCCCAAGGAAAATATATCCACCCCCAAAATAATTCGATTTGCTGTACC 180
                                                           481 AAACAGAACACCGTGTGCACC 501
                                                                                             644
                                                                                                                   421
                                                                                                                                           584
                                                                                                                                                                                        524
                                                                                                                                                                                                                                      464
                                                                                                                                                                                                                                                                                     404
                                                                                                                                                                 361
                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                               181 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 240
                                                                                                                                                                                                                                                                                                                                 344 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC 403
                                                704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 94301

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Release #1.0, version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
                                                                                                                                       TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 635 Bryant
CITY: Palo Alto
STATE: California
                                                                                                          TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                       AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: lin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 10 CLASSIFICATION:
                                              AAACAGAACACCGTGTGCACC
                                                                                            TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                               AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/050,319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                          6 36.1%;
Similarity 99.7%;
                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-May-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Modified human TNFalpha (Tumor Necrosis Factor alpha) Records
                                                                                                                                                                                                                                                                                                                                                                               Score 379; DB 7; L
Pred. No. 6.34e-289;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5150-0030
 372
```

1; Indels Length 501;

0

Gaps

0

480 643 420 583 360 523 300 463

```
밁
                                         ş
                                                                   밁
                                                                                         Š
                                                                                                                       밁
                                                                                                                                             Ş
                                                                                                                                                                        밁
                                                                                                                                                                                                   ş
                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version #1.25
SOFTWARE: Patentin Release #1.0, version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 435
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: ROBBINS, ROBERTA L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                        LOCATION: 1.372
Sequence 372 BP; 98 A; 102 C; 95 G; 77 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 3, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent No.
                241
                                                                   181
                                                                                              470
                                                                                                                       121
                                                                                                                                                 410
                                                                                                                                                                                                     350
                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                            61 CACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGACTGCAGG 120
                                                                                                                                                                                                               1 GTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACCAAGTGC 60
                                                                                                                                                                                                                                                                   Match 35.3%; Score 370; DB 7; L
Local Similarity 99.7%; Pred. No. 2.44e-281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                   GAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTCAGCTGC 180
                                                                                                                                             CACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGACTGCAGG
                                                                                                                                                                                                 GTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACCAAGTGC 409
                                                                                                                                                                                                                                                                                                                       NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STATE: California
COUNTRY: USA
ZIP: 94301
               ACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTTTTCCAG
                                       TCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGACCGGGAC
                                                                                          GAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTCAGCTGC
                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
371;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application
                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     635 Bryant Street
                                                                                                                                                                                                                                                                                                                                  CDS
                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                        double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08050319B
                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                       1; Indels
                                                                                                                                                                                                                                                                               Length 372;
                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                     Gaps
                                                                240
                                                                                                                                              469
                300
                                         589
                                                                                            529
                                                                                                                                                                                                                                                       0
```

```
밁
                          ş
                                                        B
                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
                                                                                   Query Match
Best Local S
Matches 30
                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC COMPARIBLE
COMPUTER: IBM PC COMPARIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, version #1.25
CUREENT APPLICATION DATA:
APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: ROBbins, Roberta.
NAME: ROBbins, Roberta.
12 208
                                                                                                                                       LOCATION: 1..471
Sequence 474 BP; 110 A; 126 C; 132 G; 106 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 49, Applia Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-050-319B-49 STANDARD; DNA; UNC; 474 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 49, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Negrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  650
                          454 GGATACGGACTGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAG 513
                                                     105 GGACAGGGAGAGAGAGAGTGTGAGAGGGGGCTCCTTCACCGCTTCAGAAAACCACCTCAG 164
                                                                                                                                                                                                                                                                                      TELEFAX: (415) 327-3231 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         590 ACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTTTTCCAG
165 ACACTGCCTCAGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTG 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           710 AACACCGTGTGC 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361 AACACCGTGTGC 372
                                                                                               Match 28.8%;
Local Similarity 97.8%;
                                                                                                                                                                                    MOLECULE TYPE: CDNA to mRNA FEATURE:
                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCCTGCCAGGAGAAACAG 360
                                                                                                                                                         NAME/KEY: CDS
LOCATION: 1...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAGAAACAG 709
                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                            TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9430
                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/08050319B
                                                                                                                                                                                                                                                        474 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E: Reed & Robbins
635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Floppy disk
                                                                                                                                                                                                                             double
                                                                              Score 302; DB 7; Ler
Pred. No. 3.55e-224;
Pred. No. 3.55e-27;
                                                                                                              Length 474;
                                                                                   Indels
                                                                                   0
                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         649
                                                                                   0
```

```
RESULT
ID US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    용
  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                              ATTORNEY/AGENT INFORMATION:

NAME: Pabst, Patrea L.

REGISTRATION NUMBER: 31,284
REFERENCE/DOCKET NUMBER: WU106
TELECOMMUNICATION INFORMATION:
TELEPHONE: (404) 815-6508
TELEFAX: (404) 815-6555
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 2771 base pairs
TYPE: nucleic acid
STRANDENNESS: double
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-273-411-5 STANDARD; DNA; UNC; 2771 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 5, Application US/08273411.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 5, Application US/08273411
Patent No. 5625124
                                                                                                                                                                                                                                                                             STREET: 1100 Peachtree Str
CITY: Atlanta
STATE: Georgia
COUNTRY: USA
ZIP: 30309-4530
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 514
                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Falk, Per APPLICANT: Gordon, Jeffrey I. TITLE OF INVENTION: Animal Model for Gastro-Intestinal TITLE OF INVENTION: Disease
                                                                                                                                                                                                                         CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/273,411
FILING DATE:
                                          MOLECULE TYPE: UN
                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                    PUBLICATION INFORMATION:
                                 HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGAAAACCTTTTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTC 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGAGTGTGTCTCCTGT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGAGTGTGTCTCCTGT 769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CACAGTGGACCGGGACACCGTGTGTGGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAG
                                                                                                                                                                                                             CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                         3: Patrea L. Pabst
1100 Peachtree Street, Suite 2800
Sweetser, et al
Genes & Dev.
                                 ĕ
                                                     DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                573
 RESULT
ID US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                               δδ
                                                                                                                                                                                                                                                                                                                                                                                                      믕
                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local :
                                                                                                          Sequence 3, Application US/08343401A Patent No. 5661132
GENERAL INFORMATION:
APPLICANT: Swain, William F
                                                                                                                                                                                                                                             US-08-343-401A-3 STANDARD; DNA; UNC; 4283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RELEVANT RESIDUES IN SEQ ID NO: Sequence 2771 BP; 666 A; 718 C; 704 G;
                                                                                                                                                                                       01-JAN-1900
                                                                                                                                                               Sequence 3, Application US/08343401A
                                                                                                                                                                                                             XXXXX
                                                                                                                                                                                                                                                                                         306
                                                                                                                                                                                                                                                                                                               976
                                                                                                                                                                                                                                                                                                                                     246
                                                                                                                                                                                                                                                                                                                                                           916
                                                                                                                                                                                                                                                                                                                                                                                 186
                                                                                                                                                                                                                                                                                                                                                                                                     856
                                                                                                                                                                                                                                                                                                                                                                                                                           126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           680 ATGGCTACAGGTAAGCGCCCCTAAAATCCCCTTTGGGCACAATGTGTCCCTGAGGGGAGAGG 739
                                                                                                                                                                                                                                                                                                                                                                                                                                                 798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          740 CAGCGACCTGTAGATGGGACGGGGCACTAACCCTCAGGTTTGGGGGCTTCTGAATG--AG 797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PUBLICATION INFORMATION:
AUTHORS: Sweetser, et al
JOURNAL: J. Biol. Chem.
VOLUME: 261
PAGES: 5553-5561
DATE: 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match 28.6%;
Local Similarity 97.3%;
                                                     APPLICANT: Swain, William F
APPLICANT: Macklin, Michael D
APPLICANT: Eriksson, Elof
APPLICANT: Andree, Christophe
TITLE OF INVENTION: Improved V
NUMBER OF SEQUENCES: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PUBLICATION INFORMATION:
AUTHORS: Seeburg, et
JOURNAL: DNA
                                          CORRESPONDENCE ADDRESS:
ADDRESSEE:
STREET: PO
CITY: Madi
STATE: WI
                                                                                                                                                                                                                                                                                                     GCCTGCTCTGCCTGCCTTGGCTTCAAGAGGGCAGTGCC 1013
                                                                                                                                                                                                                                                                                                                                                                                                                         TATCGCCATGTAAGCCCAGTATTTGGCCAATCTCAGAAAGCTCCTCCTCCTCGAGAGGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCCTCTGTTGCCCCTCTGGTTTCTCCCCCAGGCTCCCGGACGTCCCTGCTCCTGGCTTTTG
                                                                                                                                                                                                                                                                                                                                                                                 GGAGAGAAAAACAAACAGCTCCTGGAGCAGGGAGAGTGCTGGCCTCTTGCTCCGGC
                                                                                                                                                                                                                                                                                                                                                                                         GGAGAGAGAAAAACAACAGCTCCTGGAGCAGGGAGAGTGCTGGCCTCTTGCTCTCCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                               TATCGCCATGTAAGCCCAGTAT--GGCCAATCTCAGAAAGCTCCTGGTCCCTGGAGGGGAT 855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGGCTACAGGTAAGCGCCCCTAAAATCCCTTTGGGCACAATGTGTCCTGAGGGGAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAGES: 239-249
DATE: 1982
RELEVANT RESIDUES IN SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VOLUME: 2
PAGES: 1318-1332
DATE: 1988
RELEVANT RESIDUES IN SEQ
                                                                                                                                                                                                                                                                                         GCCTGCTCTGCCTGCCTTGCAAGAGGGCAGTGCC
                                                                                                                                                                                                                                                                                                                                     TCCCTCTGTTGCCCTCTGGTTTCTCCCCCAGGCTCCCGGACGTCCCTGCTCCTGGCTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VOLUME:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           329;
 Madison
: WI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                     PO Box 2113
                                Quarles & Brady
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         et al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 300; DB 7; L
Pred. No. 1.69e-222;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          片
                                                                Wound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ĕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ĕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5: FROM 1 TO 617; 683 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>ა</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FROM 620 TO 2771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FROM 561 TO 629
                                                                                                                                                                                                                                                                                         343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 2771;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
```

4.

Gaps

185

915

245

975

305

125

USA

```
RESULT 12
ID US-08-445-265A-1 STANDARD; DNA; UNC; 4283 BP
                                                                                                  Ş
                                                                                                                           밁
                                                                                                                                                Ş
                                                                                                                                                                        문
                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                            Query Match 28.4%;
Best Local Similarity 96.2%;
Matches 326; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 608-251-9166
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 4283 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                               NAME/KEY: sig_peptide
LOCATION: 713..1049
Sequence 4283 BP; 1023 A; 1095 C; 1114 G; 1051 T; 0 other;
                                                                                                                                                                                                                                                                                           951 CTCCCTCTGTTGCCCTCTGGTTTCTCCCCAGGCTCCCGGACGTCCCTGGCTCTTT
                                                                                                                                                                           891
                                                                                                                                                                                                                                                          772 CAGCGACCTGTAGATGGGACGGGGCACTAACCCTCAGGGTTTGGGGTTCTGAATGTGAG 831
                                                                                                                                                   185
                                                                                                                                                                                                   126
                                                                                                                                                                                                                    832 TATCGCCATCTAAGCCCAGTATTTGGCCAATCTCAGAAAGCTCCTGGCTCCCTGGAGG-A 890
                                                                                                                                                                                                                                            66 CAGCGACCTGTAGATGGGACGGGGCACTAACCCTCAGGTTTGGGGCTTCTCAATCTCAC 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
TELEPHONE: 608-251-5000
                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCATION: FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: circular MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Seay, Nicholas J
REGISTRATION NUMBER: 27,386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLONE: pwrg1630
                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY:
LOCATION:
                                                                                                                                                             TGGAGAGAGAAAAACAACAGCTCCTGGAGCAGGGAGAGTGTTGGCCTCTTGCTCTCCGG
                                                                                                                                                                                             TATCGCCATGTAAGCCCAGTATTTGGCCAATCTCAGAAAGCTCCTC-CTCCCTGGAGGGA 184
                                                                                               CTCCCTCTGTTGCCCTCTGGTTTCTCCCCCAGGCTCCCGGACGTCCCTGCTCCTGGCTTTT
                                                                                                                                               TGGAGAGAGAAAAACAAACAGCTCCTGGAGCAGGAGAGTGCTGGCCTCTTGCTCTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/0
FILING DATE: 22-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           53701-2113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                exon
713..721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              exon
981..1253
                                                                                                                                                                                                                                                                                                                                                                                                                                           join(713..721,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/08/343,401A
                                                                                                                                                                                                                                                                                                                                          Score 298; DB 7; Length 428; Pred. No. 8.01e-221; 0; M1smatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                           981..1253)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11-229-9103-9
                                                                                                                                                                                                                                                                                                                                                                  Length 4283;
                                                                                                                                                                                                                                                                                                                                          ω
··
                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                        1010
                                                                                                                                                244
```

```
Ş
                                                                                                                                                            Ş
S
                           밁
                                                  Ş
                                                                              밁
                                                                                                                                   밁
                                                                                                                                                                                        В
                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                      LOCATION: join(713...721, 981...1250)
Sequence 4283 BP; 1023 A; 1095 C; 1114 G; 1051 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No. 5697901
GENERAL INFORMATION:
APPLICANT: Eriksson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1, Application US/08445265A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/08445265A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   XXXXXX
                                                                                                                                                                                                                               713 ATGGCTACAGGTAAGCGCCCCTAAAATCCCCTTTGG-CACAATGTGTCCTGAGGGGAGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY AGENT INFORMATION:
NAME: Seay, Nicholas J
REGISTRATION NUMBER: 27386
REFERENCE/DOCKET NUMBER: 1102
TELECOMMUNICATION INFORMATION:
TELEPHONE: 608-251-5000
TELEPHONE: 608-251-9166
                                                                   891 TGGAGAGAGAAAAACAACAGCTCCTGGAGCAGGGAGAGTGTTGGGCCTCTTGCTCCGG
                                                                                                       832 TATCGCCATCTAAGCCCAGTATTTGGCCAATCTCAGAAAGCTCCTGGCTCCCTGGAGG-A 890
                                                                                                                                                                                       772 CAGCGACCTGTAGATGGGACGGGGCACTAACCCTCAGGGTTTGGGGTTCTGAATGTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 608-251-9166
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                     y Match
Local Similarity 96.2%;
hes 326; Conservative
                                                                                                                                                           66 CAGCGACCTGTAGATGGGACGGGGGCACTAACCCTCAGGTTTGGGGGCTTCTCAATCTCAC
                                                                                                                                                                                                                   σ
                                                                                                                                                                                                                                                                                                                                       FEATURE: CDS
NAME/KEY: CDS
LOCATION: joir
                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: other nucleic acid DESCRIPTION: /desc = "Plasmid DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 4283 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
               CTCCCTCTGTTGCCCTCTGGTTTCTCCCCAGGCTCCCGGACGTCCCTGCTCCTGGCTTTT 1010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/445,265A FILING DATE: CLASSIFICATION: 604
CTCCCTCTGTTGCCCTCTGGTTTCTCCCCCAGGCTCCCGGACGTCCCTGCTCCTGGCTTTT
                                                   TGGAGAGAGAAAAACAACAGCTCCTGGAGCAGGGAGAGTGCTGGCCTCTTGCTCTCCGG
                                                                                                                                                                                                                 ATGGCTACAGGTAAGCGCCCCTAAAATCCCCTTTGGGCACAATGTGTCCTGAGGGGAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 4283 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: circular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: UZIP: 53703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Madison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: Quarles & Brady STREET: 1 South Pinckney S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ÆH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 South Pinckney Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENE DELIVERY BY MICRONEEDLE INJECTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Elof
                                                                                                                                                                                                                                                                  Score 298; DB 7; L
Pred. No. 8.01e-221;
0; Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              110229.91080
                                                                                                                                                                                                                                                                                                Length 4283;
                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                     Gaps
                                                                                                        184
                                                                                                                                                              125
                                                                                                                                                                                       831
                                                   244
                                                                            950
                                                                                                                                                                                                                   ŝ
```

```
Š
                                                                       밁
                                                                                             õ
                                                                                                                                                                                             RESULT
ID US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
Ş
                       밁
                                                                                                                     밁
                                                                                                                                                                  Query Match
                                                                                                                                             Matches
                                                                                                                                                                                        NAME/KEY: CDS
LOCATION: 1..474
Sequence 477 BP; 117 A; 122 C; 131 G; 107 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 53, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 53, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       XXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-050-319B-53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TWFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
                                               404
                                                         181 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                              344
                                                                                                        121 GATAGTGTGTGTCCCCAAGGAAAAATATATCCACCCTCAAAATAATTCGATTTTGCTGTACC 180
                                                                                                                                                                                                                                                                                                               TELEFAX: (415) 327-3231 INFORMATION FOR SEQ ID NO: 53:
                                                                                                                                                       Match 24.3%;
Local Similarity 98.9%;
                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC COMPAtible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/050,319B
FILLING DATE: 10-May-1993
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 477 base pairs
TYPE: nucleic acid
CTBANTENECC: 4.516
                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: ROBbins, Roberta L
REGISTRATION NUMBER: 33,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                       TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                          MOLECULE TYPE:
TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
           TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCCACCTCAGACACTGCCTC
                                             ANGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 635 Brya
CITY: Palo Alto
STATE: Californ:
                                                                                             GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC 403
                                                                                                                                                                                                                                                     STRANDEDNESS: double TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                      TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                             258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  California
                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD; DNA; UNC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Floppy disk
                                                                                                                                                                                                                                         cDNA to mRNA
                                                                                                                                                                                                                                                                                                                                                                         33,208
                                                                                                                                         Score 255; DB 7; Le
Pred. No. 7.22e-185;
0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                5150-0030
                                                                                                                                                                 Length 477
                                                                                                                                           Indels
                                                                                                                                          0
                                                                                                                                          Gaps
                     300
                                              463
                                                                    240
                                                                                                                                          0
```

```
RESULT
ID US
                                    Š
                                                          밁
                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
             밁
                                                                                Matches
                                                                                           Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JT 14
US-08-050-319B-51 STANDARD; DNA; UNC; 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 51, Application US/08050319B Patent No. 5633145
                                                                                                                          Sequence 462 BP; 116 A; 119 C; 121 G; 106 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 51, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
300 CAGCCTCTGCCTCAATGGGACCGTGCACCTCCTCCTGCCAGGAGAAACAGAACACCGTGTG
                                    601 CTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTTTTCCAGTGCTTCAATTG
                                                                                                                                                                                                                            TELEFAX: (415) 327-323
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            524
                                                         240 CTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTTTTCCAGTGCTTCAATTG 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                        Local
                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 51
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415):617-8999
                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: Robbins, Roberta L.
REGISTRATION NUMBER: 33,2
                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Modified human TNFalpha (Tumor TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                              FEATURE:
                                                                                                                                                                         MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: M.Feldmann, P.V
APPLICANT: M.J.C. Turner,
                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
FILING DATE: 10-May
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGACACCGTGTGTGGCTGC 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGACACCGTGTGTACCTGC 381
                                                                                                                                                  NAME/KEY: CDS
                                                                                                                                                                                     TOPOLOGY: 11
                                                                                                                                                                                                         TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                       LOCATION:
                                                                                                                                                                                                                   LENGTH: 462 base pairs
                                                                               169;
                                                                                          16.18;
Similarity 100.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                             94301
                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E: Reed & Robbins
635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            M.Feldmann, P.W. Gray,
M.J.C. Turner, F.M Brennan
                                                                                                                                       1..459
                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                   Floppy disk
                                                                                                                                                                        CDNA to mRNA
                                                                                                                                                                                                                                                                                                                                                 10-мау-1993
                                                                                                                                                                                                double
                                                                                                                                                                                                                                                      327-3231
                                                                                                                                                                                                                                                                                                                                                            US/08/050,319B
                                                                                                                                                                                                                                                                                                  33,208
                                                                                          Score 169; DB 7; L
Pred. No. 1.18e-113;
                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                          5150-0030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ВÞ
                                                                                0;
                                                                                                    Length 462;
                                                                               Indels
                                                                               0
                                                                               Gaps
             359
                                    660
                                                                               0
```

Ş

661 CAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAGAAACAGAAAACACCGTGTG

```
ş
ş
                       밁
                                                                    밁
                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 15
ID US-08-187-756C-3 STANDARD; DNA; UNC; 534 BP
                                                                                          Best Loc
Matches
                                                                                                                  Query Match
                                                                                                                                  MOLECULE TYPE: cDNA
Sequence 534 BP; 108 A; 166 C; 143 G; 117 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 3, Application US/08187756C Patent No. 5597709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 3, Application US/08187756C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       XXXXXX
 333
                                           COMPUTER READABLE FORM:

MEDIUM TYPE: 3.5 INCH DISKETTE

COMPUTER: IBM PS/2

OPERATING SYSTEM: MS-DOS

SOFTWARE: WORD PERFECT 5.1

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/187,756C

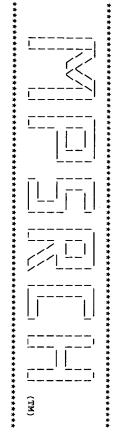
FILING DATE: January 27, 1994

CLASSIFICATION: 435

PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721 CACCTGCCATGCAGGTTTCTTTCTAAGAGAAAACGAGTGTGTCTCCTGT 769
                                                                                                                                                                                               TELEFAX: 201-994-1744
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 534 BASE PAIRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360 CACCIGCCATGCAGGTTTCTTTCTAAGAGAAAACGAGTGTGTCTCCTGT 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                     68 AGGGCAGTGCC 78
                                                                                        Match 6.6%;
Local Similarity 98.6%;
les 70; Conservative
                                                                                                                                                                                                                                              NAME: FERRARO, GREGORY D.
REGISTRATION NUMBER: 36,134
REFERENCE/DOCKET NUMBER: 325800-55
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-994-1700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: ROSEN, ET AL.
TITLE OF INVENTION: Human Growth Hormone
NUMBER OF SEQUENCE: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
AGGGCAGTGCC 343
                                                                                                                                                           TYPE: NUCLEIC ACID
STRANDEDNESS: SINGLE
TOPOLOGY: LINEAR
                                                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: US
ZIP: 07068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET: 6 BECKER F
CITY: ROSELAND
STATE: NEW JERSEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLAN, ADDRESSEE: CECCHI, STEWART & OLSTEIN STREET: 6 BECKER FARM ROAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                          ω...
                                                                                          Score 69; DB 6; L
Pred. No. 9.14e-34;
0; Mismatches 1
                                                                                                                Length 534;
                                                                                          1; Indels
                                                                                          0
                                                                                        Gaps
                                                                                        0
```

Search completed: Wed May 6 10:02:47 1998

Job time : 122 secs



Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm Run on: Wed May 6 08:27:00 1998; MasPar time 4.88 Seconds 394.142 Million cell updates/sec

Tabular output not generated.
Title: >US-08-804-166-8

Title: >US-08-804-166-8

Description: (1-336) from US08804166.pep

Perfect Score: 2541

Sequence: 1 SRTSLLLAFGLLCLPWLQEG......PSLPSPSRLPGPSDTPILPQ 336

Scoring table: PAM 150
Gap 11

Searched: 62627 seqs, 5720858 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database: a-issued

a-issued 1:bacKl 2:51 3:52 4:53 5:54 6:55 7:56 8:57 9:PCT90 10:PCT91 11:PCT92 12:PCT93 13:PCT94 14:PCT95 15:PCT96

Statistics: Mean 30.838; Variance 140.153; scale 0.220

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

1 3 3 4 4 4 4 7 7 7 1 1 1 1 1 1 1 1 1 1 1 1 1	Result
1322 1322 1024 1025 1025 1025 1025 1025 1025 1025 1025	Score
1112245668899589990000000000000000000000000000	Query Match I
455 1455 1455 1455 1455 1455 1167 1167 1174 1174 1174 1174 1174 1174	Length DB
7 US-08-050-07 US-08-050-07 US-08-050-05-07 US-08-050-05-07 US-08-050-05-07 US-08-050-07 US-08-050-05-07 US-08-050-05-07 US-08-050-05-07 US-08-050-05-07 US-08-050-05-05-05-05-05-05-05-05-05-05-05-05	B
321 Sequence 050 Sequence 050 Sequence 425 Sequence 425 Sequence 425 Sequence 050 Sequence 050 Sequence 050 Sequence 050 Sequence 050 Sequence 425 Sequence 425 Sequence 425 Sequence 425 Sequence 425 Sequence 425 Sequence 630 Sequence 6425 Sequence 650 Sequence	Description
323575817,004,770,005,	iption
Application Applic	
1.11e-110 1.11e-110 2.17e-103 6.14e-83 1.19e-82 3.07e-80 3.07e-80 3.07e-80 7.64e-74 1.01e-56 4.01e-54 4.01e-54 4.01e-48 2.47e-48 3.84e-20 2.71e-18	Pred. No.

23 298 11.7 39 7 US-03-050- Sequence 40, Applicati 1.53e-16 24 296 11.3 111 6 US-08-425- Sequence 4, Applicati 1.39e-15 25 287 11.3 111 6 US-08-425- Sequence 3, Applicati 1.39e-15 26 287 11.3 111 6 US-08-425- Sequence 3, Applicati 1.39e-15 27 282 11.1 112 6 US-08-086- Sequence 6, Applicati 3.77e-15 28 268 10.5 46 5 US-08-086- Sequence 12, Applicati 2.47e-13 29 261 10.3 46 5 US-08-086- Sequence 12, Applicati 2.47e-13 30 260 10.2 131 1 5177193- Patent NO. 5177193. 3.01e-13 31 249 9.8 46 5 US-08-086- Sequence 11, Applicati 2.65e-12 32 249 9.8 46 5 US-08-086- Sequence 13, Applicati 2.65e-12 33 230 9.1 41 5 US-08-086- Sequence 17, Applicati 1.10e-10 34 227 8.9 39 1 5451527-4 Patent NO. 5451527. 1.98e-10 35 227 8.9 39 1 5451527-12 Patent NO. 5451527. 1.98e-10 36 227 8.9 39 1 5451527-12 Patent NO. 5451527. 1.98e-10 37 227 8.9 39 1 5451527-12 Patent NO. 5451527. 1.98e-10 38 225 8.9 325 10 PCT-US91-0 Sequence 2, Applicati 2.93e-10 39 225 8.9 325 10 PCT-US91-0 Sequence 4, Applicati 2.93e-10 40 221 8.7 326 10 PCT-US91-0 Sequence 4, Applicati 6.38e-10 41 221 8.3 355 US-08-292 Sequence 4, Applicati 6.38e-10 42 218 8.3 355 US-08-292 Sequence 15, Applicati 6.38e-10 43 210 8.3 355 US-08-292 Sequence 15, Applicati 5.38e-09 44 212 8.3 474 1 5395760-4 Patent NO. 5451527. 5.55e-09 45 209 8.2 36 1 5451527-5 Patent NO. 5451527. 5.55e-09																							
11.7 35 7 US-03-050 Sequence 40, Applicati 2.38e 11.3 111 6 US-08-425- Sequence 4, Applicati 1.39e 11.3 111 6 US-08-425- Sequence 3, Applicati 1.39e 11.3 111 6 US-08-425- Sequence 6, Applicati 1.39e 11.3 111 6 US-08-086- Sequence 6, Applicati 1.39e 11.3 111 6 US-08-086- Sequence 14, Applicati 1.39e 11.3 1517193- Sequence 17, Applicati 1.47e 10.5 46 5 US-08-086- Sequence 11, Applicati 1.47e 10.2 131 1517193- Patent NO. 5177193- 3.01e 19.8 46 5 US-08-086- Sequence 11, Applicati 1.65e 19.8 46 5 US-08-086- Sequence 11, Applicati 1.05e 19.8 46 5 US-08-086- Sequence 11, Applicati 1.05e 19.8 46 5 US-08-086- Sequence 12, Applicati 1.05e 19.1 10.5451527- Patent NO. 5451527- 1.98e 19.1 10.5451527- Patent NO. 5451527- 1.98e 19.1 10.551527- Sequence 2, Applicati 2.93e 10.551527- Sequence 2, Applicati 3.65e 19.57162- Sequence 4, Applicati 3.65e 19.57162- Sequence 6, Applicati 3.65e 19.57162- Sequence 6, Applicati 5.38e 19.57162	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23
.7 39 7 US-03-050- Sequence 40, Applicati 1.53e- 45 15451527-1 Patent No. 5451527. 3 111 6 US-08-425- Sequence 4, Applicatio 1.39e- 112 6 US-08-425- Sequence 3, Applicatio 1.39e- 112 6 US-08-425- Sequence 6, Applicatio 1.39e- 112 6 US-08-086- Sequence 12, Applicati 6.14e- 46 5 US-08-086- Sequence 12, Applicati 2.47e- 131 1 5177193-3 Patent No. 5177193-3 .01e- 132 15 US-08-086- Sequence 13, Applicati 2.65e- 146 5 US-08-086- Sequence 13, Applicati 2.65e- 147 1 SUS-08-086- Sequence 13, Applicati 2.65e- 148 1 SUS-08-086- Sequence 13, Applicati 2.65e- 149 1 S451527-8 Patent No. 5451527. 198 29 1 S451527-12 Sequence 2, Applicati 2.93e- 198 25 US-08-292- Sequence 2, Applicatio 2.93e- 198 25 US-08-292- Sequence 2, Applicatio 6.38e- 198 25 US-08-292- Sequence 4, Applicatio 6.38e- 198 25 US-08-292- Sequence 15, Applicatio 6.38e- 199 31 S451527-5 Patent No. 5451527. 199 325 US-08-292- Sequence 15, Applicatio 6.38e- 199 326 US-08-292- Sequence 15, Applicatio 6.38e- 199 327 US-08-292- Sequence 15, Applicatio 6.38e- 199 327 US-08-292- Sequence 15, Applicatio 5.38e- 199 327 US-08-292- Sequence 15, Applicatio 5.38e- 199 327 US-08-292- Sequence 15, Applicatio 5.38e- 199 327 US-08-292- Sequence 5, A	209	212	210	212	221	221	225	225	227	227	227	227	230	249	249	260	261	268	282	287	287	296	298
7 US-03-050 Sequence 40, Applicati 1.53e- 1 5451527-1 Patent No. 5451527. 1 0S-08-425 Sequence 4, Applicatio 1.39e- 6 US-08-425 Sequence 6, Applicatio 1.39e- 6 US-08-425 Sequence 14, Applicatio 5.14e- 5 US-08-086 Sequence 14, Applicati 2.47e- 1 5177193-3 Patent No. 5177193 2.55e- 5 US-08-086 Sequence 11, Applicati 2.65e- 5 US-08-086 Sequence 11, Applicati 2.65e- 5 US-08-086 Sequence 17, Applicati 1.98e- 5 US-08-086 Sequence 21, Applicati 1.98e- 1 5451527-4 Patent No. 5451527. 1.98e- 1 5451527-4 Patent No. 5451527. 1.98e- 1 5451527-1 Patent No. 5451527. 1.98e- 1 5451527-1 Patent No. 5451527. 2.93e- 1 5451527-1 Sequence 2, Applicati 2.93e- 5 US-08-292 Sequence 2, Applicati 2.93e- 5 US-08-292 Sequence 2, Applicati 3.65e- 5 US-08-086 Sequence 4, Applicati 6.38e- 5 US-08-086 Sequence 4, Applicati 6.38e- 5 US-08-086 Sequence 5, Applicati 3.65e- 5 US-08-086 Sequence 6, Applicati 3.65e-																							
US-08-050- Sequence 40, Applicati 2.38- 5451527.1 Patent No. 5451527. US-08-425- Sequence 4, Applicatio 1.39e- US-08-425- Sequence 3, Applicatio 1.39e- US-08-086- Sequence 6, Applicati 5.14e- US-08-086- Sequence 12, Applicati 2.47e- 5177193- Patent No. 5177193. US-08-086- Sequence 13, Applicati 2.65e- US-08-086- Sequence 17, Applicati 2.65e- US-08-086- Sequence 17, Applicati 1.10e- 5451527-4 Patent No. 5451527. 5451527-12 Patent No. 5451527. 5451527-12 Patent No. 5451527. 5451527-12 Patent No. 5451527. 198e- PCT-US91-0 Sequence 2, Applicati 2.93e- PCT-US91-0 Sequence 4, Applicati 6.38e- PCT-US91-0 Sequence 4, Applicati 6.38e- US-08-292- Sequence 4, Applicati 6.38e- US-08-292- Sequence 6, Applicati 5.38e- US-08-292- Sequence 6, Applicati 5.38e- US-08-292- Sequence 6, Applicati 5.38e- S95760-4 Patent No. 5451527. 5451527-5 Patent No. 5451527. 5451527-5 Patent No. 5451527.	36										39	34	41	46	46	131	46	46	112	111	111	45	39
38-050 sequence 40, Applicati 1.53e- 527-1 patent No. 5451527.  8-425 sequence 4, Applicatio 1.39e- 8-425 sequence 6, Applicatio 1.39e- 8-425 sequence 14, Applicatio 1.39e- 8-086 sequence 12, Applicati 2.47e- 18-086 sequence 11, Applicati 2.65e- 18-086 sequence 11, Applicati 2.65e- 18-086 sequence 11, Applicati 2.65e- 18-086 sequence 13, Applicati 2.65e- 18-086 sequence 17, Applicati 1.0e- 1527-4 patent No. 5451527.  1.98e- 527-6 patent No. 5451527.  1.98e- 1.98-	1	<u>,                                    </u>		-	_	σ	5	G	ω	_	۲	_	u	v	ហ		ഗ	U	0	σ	σ	<b>,_</b>	7
40, Applicati 2.38e 4, Applicati 1.39e 5, Applicati 1.39e 6, Applicati 1.39e 6, Applicati 5.14e 11, Applicati 2.47e 12, Applicati 2.65e 13, Applicati 2.65e 13, Applicati 1.10e 0. 54751527. 1.98e 0. 5451527. 1.98e 2, Applicati 2.93e 2, Applicati 2.93e 4, Applicati 5.38e 4, Applicati 6.38e 4, Applicati 6.38e 6, Applicati 5.38e	51527-	ø	)8-292	980-80	·US91-	N	US91-	08-292	PCT-US94-0	5451527-12	51527-		08-086	08-086	-08-086	77193-	-08-086	-08-086	-08-425	-08-425	-08-425	U	
	t No.		σ	_	e 4,	e 4,	'n	'n	29, Applicat	No. 54	t No. 5451527	o. 5451527	17,	13,	11,	No. 51	12,	14,	6	ω	4		40,
	.52e-	. 65e-	.38e-	.65e-0	.38e-	.38e-	.93e-	.93e-1	.98e-1	98e-1	98e-1	98e-1	10e-	.65e-	.65e-	.01e-	.47e-	.14e-	.77e-	.39e-			

# ALIGNMENTS

88	36	25	გ	გ	ဥ	റ്റ	റ്റ	റ്റ	၉	ဌ	ဌ	ဥ	ဌ	გ	ဂ	გ	ဌ	გ	റ്റ	ဂ္ဂ	റ്റ	റ്റ	ဂ	റ്റ	റ്റ	റ്റ	ဂ	င္ပ	දි	റ്റ	റ്റ	റ്റ	ც :	င္ပ	റ്റ	×	DE	XX	ğ	××	a	×	Ü	RESULT
TELEX: 202-/3/-3528 TELEX: 248633	t-	TELECOMMUNICATION INFORMATION:	REFERENCE/DOCKET NUMBER: WALLACH=13	TRATION NUMBER:	NAME: BROWDY, Roger L.	ATTORNEY/AGENT INFORMATION:	r-199	APPLICATION NUMBER: IL 107268		CLASSIFICATION: 435	FILING DATE: 12-OCT-1994	APPLICATION NUMBER: US/08/321,668	CURRENT APPLICATION DATA:	PatentIr	OPERATING SYSTEM: PC-DOS/MS-DOS	8	MEDIUM TYPE: Floppy disk		$\simeq$	к	STATE: D.C.	Washington	5		CORRESPONDENCE ADDRESS:	SEQUENCES: 42	TITLE OF INVENTION: THE TNF RECEPTORS, THEIR PREPARATION AND	NVENTION:	BATKIN, Mich.		BRAKEBUSC	APPLICANT: WALLACH, David		5665859	Sequence 2, Application US/08321668		Sequence 2, Application US/08321668.		01-JAN-1900		XXXXXX		US-08-321-668-2 STANDARD; PRT; 455 AA.	LT 1

THEIR USE

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       88888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 25, Application US/08050319B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-050-3198-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 25, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101
                                               TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 3
SEQUENCE CHARACTERISTICS:
LENGTH: 455 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 455 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match 52.0%;
Local Similarity 100.0%;
Local 171; Conservative
                                                                                                                                                                              COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version #1.25
CURENT APPLICATION DATA:
APPLICATION UMBER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 435
CLASSIFICATION: 435
MOLECULE TYPE: protein
JENCE 455 AA; 50579 MW; 1048388 CN;
                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: ROBELLA.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: protein
JENCE 455 AA; 50494 MW; 1048031 CN;
                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                           ADDRESSEE: Reed & Robbins
STREET: 635 Bryant Street
CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: amino acid
                                   TYPE: amino acid
                                                                                                                                                                                                                                                                                                   COUNTRY: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       455 amino acids
                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 1322; DB 7; Pred. No. 1.11e-110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
```

```
Š
                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 17
                                                    Query Match
Best Local S
Matches 15
                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: ROBBITS, ROBERTS I.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-899
TELEPRAY: (415) 327-3231
INFORMATION FOR SEQ ID NO: 48:
SEQUENCE CHARACTERISTICS:
I ENTER: 10 2016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-050-319B-48
                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 48, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 48, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 161 KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83 SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41 DSYCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity 100.0%;
               41 DSVCPTGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23
 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                       LENGTH: 199 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
JENCE 199 AA; 22186 MW; 195553 CN;
                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Patentin Release #1.0, version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KONTYCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTT 193
 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/08/050,319B FILING DATE: 10-May-1993 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                  Similarity
                                                    48.9%;
llarity 99.4%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Reed & Robbins
                                                  Score 1243; DB 7;
Pred. No. 2.75e-103;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 1322; DB 7;
Pred. No. 1.11e-110;
                                                                                                                                                                                                                                              5150-0030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 455;
                                                                               Length 199;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            82
                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                밁
                                                              밁
                                                                                   Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2, Application US/08425673.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-425-673-2
                                       198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 2, Application
                67
                                                                                                                                                                                                               TELEFAX: (609) 466-2760
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83
                                                                                                                                                                                                                                                                                                CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/
EILING DATE: 18-JUN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Muccino, Richard R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                     HYPOTHETICAL: NO
ANTI-SENSE: NO
JENCE 145 AA; 15544 MW; 114662 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Moyle, William R.
APPLICANT: Campbell, Robert K.
TITLE OF INVENTION: Analogs of Glycoprotein Hormones Having
TITLE OF INVENTION: Altered Receptor Binding Specificity and
TITLE OF INVENTION: Methods For Preparing and Using Same
                                                                                                                                                                 TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: pep
                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: Richard R.
                                                                                                                                                                                                                                                    TELEPHONE: (609) 466-3407
                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQI 199
IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KONTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQI 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: UMD
                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET:
                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                 ch 40.3%;
l Similarity 99.3%;
138; Conservative
                                                                                                                                                                                                      LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Princeton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New Jersey
                                                                                                                                                                                                     145 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P.O. Box 1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                                                                                                                linear
                                                                                                                                                                    peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Altered Receptor Binding Specificity and Activity and Methods For Preparing and Using Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/08425673
                                                                                                                                                                                                                                                                                                                                                                                     US/08/425,673
                                                                                 Score 1025; DB 6;
Pred. No. 6.14e-83;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Muccino
                                                                                                                                                                                                                                                                                                                                        07/717,151
                                                                                                                                                                                                                                                                           1.0-004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                145
                                                                                                        Length 145;
                                                                                  Indels
                                                                                   0
                                                                                 Gaps
                                                                                  0;
```

```
밁
                                                                                                                                   RESULT
ID US
XX
Š
                                           Ş
                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                     Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-425-673-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1, Application US/08425673.
 258
                                            198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1, Application US/08425673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent No.
                       67
                                                                                     y Match 40.3%;
Local Similarity 99.3%;
hes 138; Conservative
                                                                                                                                                                                               TELEFAX: (609) 466-2760
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 145 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION: APPLICANT: Moyle,
                                                                                                                                                                                                                                                                              CLASSIFICATION: 514
PRIOR APPLICATION DATA:
RAPPLICATION NUMBER: US 07/
FILING DATE: 18-JUN-1991
ATTORNEY/AGENT INFORMATION:
NAME: MUCCINO, Richard R.
REGISTRATION NUMBER: 32,531
                                                                                                                                                                                                                                                        REGISTRATION NUMBER: 32,538
REFERENCE/DOCKET NUMBER: UM
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                ANTI-SENSE: NO
JENCE 145 AA; 15544 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
ADDRESSEE: Richard R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Campbell, TITLE OF INVENTION: & TITLE OF INVENTION: & TITLE OF INVENTION: N
                                                                                                                                                      HYPOTHETICAL:
                                                                                                                                                                MOLECULE TYPE:
            IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 126
                                        IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SLPSPSRLPGPSDTPILPQ 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SLPSPSRLPGPSDTPILPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 317
                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                      TYPE: amino acid
                                                                                                                                                                                                                                              TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    08551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Princeton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P.O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                            linear
                                                                                                                                                        ö
                                                                                                                                                                                                                                                 (609) 466-3407
                                                                                                                                                                                                                                                                                                                                                                                                                             Floppy disk
                                                                                                                                                                 peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Box 1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       William R.

    Robert K.
Analogs of Glycoprotein Hormones Having
Altered Receptor Binding Specificity and
Methods For Preparing and Using Same

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R. Muccino
                                                                                                                                                                                                                                                                                                                                                                        US/08/425,673
                                                                                     Score 1025; DB 6; Length 145; Pred. No. 6.14e-83; 0; Mismatches 1; Indels
                                                                                                                                  114662 CN;
                                                                                                                                                                                                                                                                                                                              07/717,151
                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                      1.0-004
                                                                                                                                                                                                                                                                                                                                                                                              Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Specificity and
1 Using Same
                                                                                      0;
                                                                                      Gaps
 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Activity
                                                                                      0
```

밁

127

SLPSPSRLPGPSDTPILPQ 145

```
밁
                                                                      Ş
                                   Query Match
Best Local
                         Matches
                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1, Application US/08298189B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       XXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-298-189B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1
Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        318
                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: BYIAN D. VOYCE
REGISTRATION NUMBER: 28,917
REFERENCE/DOCKET NUMBER: DSI1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-638-3939 or 803-272-1471
INFORMATION FOR SEQ. ID NO: 1:
                       Local Similarity
mes 137; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
7 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 66
                                                                                                                       IDENTIFICATION METHOD: N-te
PUBLICATION INFORMATION:
AUTHORS: Keutmann et alia
TITLE: "A Receptor-binding
JOURNAL: Proc Nat'l Acad Sc
                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible OPERATING SYSTEM: Windows 95 SOFTWARE: Microsoft Word 7.0 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM
MEDIUM TYPE: 3.5" d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Dr. Laurence A. Cole and Dr. Andrew Kardana TITLE OF INVENTION: No. 5674727el Methods for Detecting Reproductive TITLE OF INVENTION: Cancers or Tumors and Assay Products TITLE OF INVENTION: Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                      ORIGINAL SOURCE: FEATURE:
                                                                                                                                                                                                                           MOLECULE TYPE: subunit of hormone, MOLECULE TYPE: beta\subunit of hCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SLPSPSRLPGPSDTPILPQ 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       σ
                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US FILING DATE: 08/31/94 CLASSIFICATION: 435
                                                                               PAGES: 2038-2042
DATE: 1987
                                                                                                                                                                                                                                                          TYPE: amino acid
STRANDEDNESS: No.
                                                                                                     ISSUE:
                                                                                                               VOLUME:
                                                                                                                                                                                NAME/KEY: beta subunit of hCG that is nicked by GBNE LOCATION: hCG
                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                 LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ,1
                                                                    145 AA; 15476 MW; 116769 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New Haven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/08298189B
                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Connecticut
                                                                                                                                                                                                                                                                                145 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        333 Cedar Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                  Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dr.
                                                                                                  5674727 applicable
                                  40.1%;
                                                                                                                                                                                                                                                          No. 5674727 applicable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Laurence A. Cole
                                                                                                                                                                                                                human urine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           diskette
                                                                                                                                                                                                                                                                                                                                                                                                                   US/08/298,189B
                                  Score 1020;
Pred. No. 1.
                         2
                                                                                                                                                                   N-terminal sequence analysis
                        Mismatches
                                                                                                                                    Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                  DB /;
1.79e-82;
0;
                                                                                                                                                                                                                                     specifically
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   c/o Dept.
                                                                                                                                    'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            145 AA
                                            Length 145;
                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of Obstetrics
                                                                                                                                   Choriogonadotrophin/Lutopi
                        0;
                        Gaps
                        0
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
ş
                      밁
                                             Matches
                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-425-673-10
                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 10, Application US/08425673.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 10, Application US/08425673
 198 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67
                                                      Match 39.28;
Local Similarity 96.48;
                                                                                                                                                                                    TELEFAX: (609) 466-27
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
            7 PRCRPINATLAVEKEGCPVCITVNITICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 66
                                                                                        HYPOTHETICAL: NO
ANTI-SENSE: NO
JENCE 145 AA; 15448 MW; 114931 CN;
                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 145 amino acid
TYPE: amino acid
                                                                                                                                                                                                          TELEPHONE: (609) 466-3407
                                                                                                                                                                                                                                           APPLICATION NUMBER: US 0
FILING DATE: 18-UN-1991
ATTORNEY/AGENT INFORMATION:
NAME: MUCCINO, RICHARD REGISTRATION NUMBER: 32,
                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: Analogs of Glycoprotein Hormones Having TITLE OF INVENTION: Altered Receptor Binding Specificity an TITLE OF INVENTION: Methods For Preparing and Using Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Moyle, Wil
APPLICANT: Campbell,
                                                                                                                          MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTNTRVLQGVLPALPQVVCNYRDVRES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SLPSPSRLPGPSDTPILPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SLPSPSRLPGPSDTPILPQ 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IRLPGCPRGVNPVVSYAVALSCQCALCKKSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP
                                                                                                                                         TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET:
                                                                                                                                                                                                                                  REGISTRATION NUMBER: 32,538
REFERENCE/DOCKET NUMBER: UMD 1.0-004
                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                             134;
                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                        08551
                                                                                                                                                                                                                                                                                                                                                                                                                                            Princeton
New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5508263
                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                      P.O. Box 1267
                                                                                                                                                             145 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Moyle, William R
                                                                                                                                      linear
                                                                                                              .. peptide
                                                                                                                                                                                                                                                                                                                                                                                                Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                466-2760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      336
                                                                                                                                                                                                                                                                                                                                        US/08/425,673
                                                      Score 995; DB 6;
Pred. No. 3.81e-80;
                                             1; Mismatches
                                                                                                                                                                                                                                                                                          07/717,151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                  Length 145;
                                                                                                                                                                                                                                                                                                                                                                #1.25
                                             Indels
                                             0
                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                257
                                             0
```

5 B 5 B

```
Matches
                                                                                                                   Query Match
Best Local 9
                                                                                                                                                                              NAME: RObbins, Roberta L.

REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEPHONE: (415) 327-3331
INFORMATION FOR SEQ ID NO: 57:
SEQUENCE CHARACTERISTICS:
LENGTH: 167 amino acids
TYDET. Brids acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 57, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-050-319B-57
                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               XXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    318
143
                   161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent No. 5633145
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 57, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       258
                                                      101
                                                                     83
                                                                                                                                                                                                                                                               SOFTWARE: Patentin Release CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/
FILING DATE: 10-May-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67
                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                  STREET: DIALTO CITY: Palo Alto STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: Modified human TNFalpha (Tumor TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: M.Feldmann, P.V
APPLICANT: M.J.C. Turner,
                                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SLPSPSRLPGPSDTPILPQ 336
          KQNTVCT 167
                                  œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SLPSPSRLPGPSDTPILPQ 145
                                                                                                                                                               TYPE: ami
                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                      39.2%;
l Similarity 100.0%;
l27; Conserva+:--
                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                             167 AA; 18626 MW; 139513 CN;
                                                                                                                                                                                                                                                                                                                                                             94301
                                                                                                                                                              amino acid
GY: linear
                                                                                                                                                                                                                                                                                                                                                                                            635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                   M.Feldmann, P.W. Gray, M.J.C. Turner, F.M Brennan
                                                                                                                                                                                                                                                                                                              PatentIn Release #1.0, version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                       Reed & Robbins
                                                                                                                                                                                                                                                                                                                                       Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                         Pred.
0; M
                                                                                                                                                                                                                                                                                            US/08/050,319B
                                                                                                                   Score 996; DB 7; Pred. No. 3.07e-80;
                                                                                                                                                                                                                                       5150-0030
                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               167
                                                                                                          0;
                                                                                                                          Length 167;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₿
                                                                                                          Indels
                                                                                                          0
                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       126
                                                                                                          0
                                                                                                                                                                                                                   RESULT
ID U
                                                                      Ş
                                                                                        밁
                                                                                                        Ş
                                                                                                                           밁
                                                                                                                                          Š
                                                                                                                                                              밁
RXAX
                                                                                                                                                                                Matches
01-JAN-1900
                                                                                                          83
```

8 B 8

밁

S B

```
Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: protein SEQUENCE 167 AA; 18626 MW; 139513 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 167 antino acids
TYPE: 5170.544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-050-319B-2
XXXXXX
                                    US-08-050-319B-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2, Application US/08050319B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      XXXXXX
                                                                                                          143
                                                                                                                                                                                                   101 SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 2, Application
                                                                                                                                          161 KONTVCT 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patent No.
                                                                                                                                                                                                                                                                           41 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                      23 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC COMPUTABLE OPERATING SYSTEM: PC-DOS/MS-DOS SOTTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                        10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION: NAME: Robbins, Roberta L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                          KONTVCT
                                                                                                                                                                                  SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 10-May
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: 635 Bryant Street CITY: Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                           ch 39.2%;
l Similarity 100.0%;
127; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-May-1993
N: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08/050,319B
                                                                                                                                                                                                                                                                                                                                              Score 996; DB 7;
Pred. No. 3.07e-80;
                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        167
                                    124
                                    A
                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₽
                                                                                                                                                                                                                                                                                                                                                               Length 167
                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                               0
```

```
X4X4X3X333333
                                                                                                                                            RESULT
ID US
                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                     Best Loc.
                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                      Sequence 50,
                                                                                              01-JAN-1900
                                                                                                                                            US-08-050-319B-50
                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                  Sequence 50, Patent No. 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 4,
Patent No.
                                                                                                                                                                                           145
                                                                                                                                                                                                                121
GENERAL INFORMATION:
APPLICANT: M.Feld
APPLICANT: M.J.C.
                                                                                                                                                                                                                                         85
                                                                                                                                                                                                                                                                51
                                                                                                                                                                                                                                                                                        25
                                                                                                                                                                                                                                                                                                                                               Match 38.6%;
Local Similarity 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (415) 327-3231 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                           1 VCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
UNMBER OF SEQUENCES: 57
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 124 amino acid
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: ROBEITS L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA:
                                                                                                                                                                                          NTVC
                                                                                                                                                                                                                NTVC
                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE:
                                                                                                                                                                                                                                      SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQ 144
                                                                                                                                                                                                                                                                                    VCPQGKTIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSC
                                                                                                                                                                                                                                                              SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQ 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Palo Alto
STATE: California
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/0 FILING DATE: 10-May-1993 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4, Application US/08050319B
                                                                                                                                                                                           148
                                                                                                                                                                                                                124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                   JE TYPE: protein
124 AA; 14047 MW;
                                  ), Application 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                    H: 124 amino acids
amino acid
                                                                     Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/08050319B
                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               635 Bryant Street
M.Feldmann, P.W. Gray,
M.J.C. Turner, F.M Brennan
                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Reed & Robbins
                                                                                                                                            STANDARD;
                                               US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/08/050,319B
                                                                                                                                                                                                                                                                                                                                     Score 981; DB 7;
Pred. No. 7.64e-79;
0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                         4.
                                                                                                                                                                                                                                                                                                                                                                                   75840 CN;
                                                                                                                                            157
                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                           Length 124;
                                                                                                                                          ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Receptor
                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                     84
                                                                                                                                                                                                                                                                                                                                   0
Š
                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE 157 AA; 17570 MW; 122247 CN;
                                                                                                                                                              Sequence 9, Application US/08425673.
                                                                                                                                                                                                                XXXXXX
                                                                                                                                                                                                                                     US-08-425-673-9
                                                                                                                                                                                      01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IIBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-Msy-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                               Sequence 9, Application US/08425673
Patent No. 5508261
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                    180 QI 181
                                                                                                                                                                                                                                                                                                           156 QI 157
                                                                                                                                                                                                                                                                                                                                  120 ENLFQCFNCSLCLNGTVHLSCQEKQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLP 179
                                                                                                                                                                                                                                                                                                                                               96 ENLFQCFNCSLCLNGTVHLSCQEKQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLP 155
                                                                                                                                                                                                                                                                                                                                                                                              36 DREKRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWS
                                                                                                                                                                                                                                                                                                                                                                                                                                          Match 36.5%;
Local Similarity 97.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
                                                                                                                                                                                                                                                                                                                                                                                 60 DTDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWS 119
                                           TITLE OF INVENTION: Analogs of Glycoprotein Hormones Having ITILE OF INVENTION: Altered Receptor Binding Specificity an TITLE OF INVENTION: Methods For Preparing and Using Same NUMBER OF SEQUENCES: 12
                                CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: !
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION:
                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 635 Bryant Street CITY: Palo Alto STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Robbins, Roberta L. REGISTRATION NUMBER: 33,208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94301
Princeton
                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
        E: Richard R. Muccino
P.O. Box 1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                         Campbell, Robert K
                                                                                                     Moyle,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Reed & Robbins
                                                                                                                                                                                                                                      STANDARD;
                                                                                                     William R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Modified human INFalpha (Tumor Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 928; DB 7;
Pred. No. 6.44e-74

    Mismatches

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50:
                                                                                                                                                                                                                                      114 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                2
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 157
```

Indels

0

Gaps 95

Specificity and Activity and

STATE: |

New Jersey

USA

```
밁
                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                           Sequence 7, Application US/08425673.
                                                                                                                                                                                                                                                    01-JAN-1900
                                                                                                                                                                                                                                                                          XXXXXX
                                                                                                                                                                                                                                                                                                US-08-425-673-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                        198
                                                                                                                                                                                             Sequence 7, Application US/08425673 Patent No. 5508261
                                                                                                                                                                                                                                                                                                                                            258
                                                                                                                     GENERAL INFORMATION:
APPLICANT: Moyle, William R.
APPLICANT: Campbell, Robert K.
TITLE OF INVENTION: Analogs of Glycoprotein Hormones Having
TITLE OF INVENTION: Altered Receptor Binding Specificity and Activity
TITLE OF INVENTION: Methods For Preparing and Using Same
                                                                                                                                                                                                                                                                                                                                                                 67
                                                                                                                                                                                                                                                                                                                                                                                                                            29.18;
Local Similarity 93.38;
es 97; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (609) 466-2760 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                7 PRCRPINATLAVEKEGCPVCITVNITICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: 32,538
TELECOMMUNICATION INFORMATION:
TELEPHONE: (609) 466-3407
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                        NUMBER OF SEQUENCES: 1:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Richard R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 114 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 08551
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: peptide HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 18-JUN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                        IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTC 301
                                                                                                                                                                                                                                                                                                                                                      IRLPGCPRGVNPVVSYAVALSCQCALCDSDSTDCGGPKDHPSYC 110
                                                                                                                                                                                                                                                                                                                                                                                    PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 257
                                    STATE: N
COUNTRY:
ZIP: 085
                                                                   STREET:
CITY: P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Muccino, Richard REGISTRATION NUMBER: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/425,673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              114 AA; 12250 MW; 68564 CN;
                                     08551
                                                      Princeton
New Jersey
                                                                       P.O. Box 1267
                                             USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ĕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Floppy disk
                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                12
                                                                                                                                                                                                                                                                                                                                                                                                                              Score 740; DB 6; Len
Pred No. 1.61e-56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        07/717,15:
                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Version #1.
                                                                                                                                                                                                                                                                                               114
                                                                                                                                                                                                                                                                                               A
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 114;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 11, Application US/08425673.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-425-673-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 11, Application US/08425673 Patent No. 5508261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 198 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           258 IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPR 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (609) 466-2760
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 114 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: Moyle, William R.
APPLICANT: Campbell, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67 IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCTVRGLGPSYCDDPR 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               / Match 28.9%;
Local Similarity 91.7%;
hes 99; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7 PRCRPINATLAVEKEGCPVCITVNITICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 66
                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: LBM PC compatible
COMPATIBLE
COMPUTER: LBM PC COMPATIBLE
COMPATIBLE
COMPUTER: LBM PC COMPATIBLE
COMPATIBLE
COMPUTER: LBM PC COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPUTER: LBM PC COMPATIBLE
COMPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 32,538
REFERENCE/DOCKET NUMBER: UMD 1.0-004
TELECOMMUNICATION INFORMATION:
                                                                      SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Campbell, Robert K.
TITLE OF INVENTION: Analogs of Glycoprotein Hormones Having
TITLE OF INVENTION: Altered Receptor Binding Specificity an
TITLE OF INVENTION: Methods For Preparing and Using Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: peptide HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 18-JUN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/425,673
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                    CITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM:
SOFTWARE: Patentl
                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                          STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       114 AA; 12401 MW; 67071 CN;
                                                                                                                                                                                                                              08551
                                                                                                                                                                                                                                                                                                  Princeton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Muccino, Richard
                                                                                                                                                                                                                                                                       New Jersey
                                                                                                                                                                                                                                                                                                            P.O. Box 1267
                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PatentIn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (609) 466-3407
514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                     12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US 07/717,151
                                               US/08/425,673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 734; DB 6;
Pred. No. 5.77e-56;
0; Mismatches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             117 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                    and Activity and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

8888888888888888888888

TELEFAX: (609) 466-2760 INFORMATION FOR SEQ ID NO:

11:

TELEPHONE:

(609) 466-3407

REGISTRATION NUMBER: 32,538
REFERENCE/DOCKET NUMBER: UMD 1
TELECOMMUNICATION INFORMATION:

.0-004

NAME: Muccino, Richard R.

PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 18-JUN-1991
ATTORNEY/AGENT INFORMATION:

07/717,151

SEQUENCE CHARACTERISTICS:
LENGTH: 117 amino acids

TYPE: amino acid TOPOLOGY: linear

밁

Query Match 28.1%; Best Local Similarity 98.9%; Matches 93; Conservative

Score 714; DB 6; Pred. No. 4.01e-54; 0; Mismatches ]

μ,

0

Gaps

Length 117 Indels

SEQUENCE

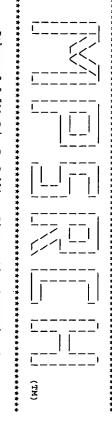
ANTI-SENSE: NO JENCE 117 AA; 12890 MW; 72412 CN;

MOLECULE TYPE: peptide HYPOTHETICAL: NO ANTI-SENSE: NO

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-425-673-8
                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 8, Application US/08425673.
                                                                                                                                                                                                                                                                                                                                                                                                                                01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                         XXXXXX
                                                                                                                                                                                                                                                                                                                                                    Sequence 8, Application US/08425673
Patent No. 5508261
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            198 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       67 IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDC 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7 PRCRPINATLAVEKEGCPVCITVNITICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES
                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/425,673
                                                                                                                                                                                                                                                                                   APPLICANT: Moyle, William R.
APPLICANT: Campbell, Robert K.
TITLE OF INVENTION: Analogs of Glycoprotein Hormones Having
TITLE OF INVENTION: Altered Receptor Binding Specificity and Activity and
TITLE OF INVENTION: Methods For Preparing and Using Same
                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/717,151
FILING DATE: 18-JUN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: P.O. Box CITY: Princeton STATE: New Jersey
                                                                           FILING DATE:
CLASSIFICATION: 514
  REGISTRATION NUMBER: 32,538
                                                                                                                                                                                        ZIP: 08551
                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                        ADDRESSEE: Richard R. Muccino
STREET: P.O. Box 1267
                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      66
```

```
888888888888888
                                ş
                                                       밁
                                                                           δÃ
                                                                                                    밁
                                                                                                                                     Query Match
Best Local 9
                                                                                                                            Matches
                                                                                                                                                                         SEQUENCE
                                258 IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDC
                                                                            198 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 257
                                             67 IRLPGCPRGVNPVVSYAVALSCQCALCDSDSTDC
                                                                                                                                                                                                                                                                   TELEFAX: (609) 466-2760 INFORMATION FOR SEQ ID NO:
                                                                                          7 PRCRPINATLAVEKEGCPVCITVNITICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 66
                                                                                                                                                                                 MOLECULE TYPE:
HYPOTHETICAL: N
ANTI-SENSE: NO
                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 114 amino acid:
                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: UM
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                   LENGTH: 114 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                          TELEPHONE:
                                                                                                                        h 26.9%;
Similarity 94.7%;
89; Conservative
                                                                                                                                                                       114 AA; 12242 MW; 69571 CN;
                                                                                                                                                                                                ĕ
                                                                                                                                                                                                                                                                                           (609) 466-3407
                                                                                                                                                                                                         peptide
6 08:27:26 1998
                                                                                                                         Score 684; DB 6;
Pred. No. 2.31e-51;
1; Mismatches 4
                                                                                                                                                                                                                                                                    œ
..
                                                                                                                                                                                                                                                                                                                 OMD
                                                                                                                                                                                                                                                                                                                  1.0-004
                                                      100
                                291
                                                                                                                          .
                                                                                                                                               Length 114;
                                                                                                                         Indels
                                                                                                                         0
                                                                                                                          Gaps
                                                                                                                          ö
```

Search co Job time completed: Wed May ne : 26 secs.



Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_nn n.a. n.a. database search, using Smith-Waterman algorithm

Run on: Wed May 6 11:17:48 1998; MasPar time 73.35 Seconds 934.882 Million cell updates/sec

Tabular output not generated.

Description:
Perfect Score:
N.A. Sequence: Title: 1301 >US-08-804-166-7 (1-1301) from US08804166.seq

Comp: 1 CTCGAGATGGCTACAGGTAA..... CTCGAGATGGCTACAGGTAA......CACAATAAGGATCCCTCGAGGAGCTCTACCGATGTCCTACCGATT......GTGTTATTCCTAGGGAGCTC 1301

Scoring table: TABLE default Gap 6

Nmatch

Searched: 102136 seqs, 26354296 bases

×

Dbase 0; Query 0

Post-processing: Minimum Match 0% Listing first 45 summaries

Database:

n-issued 1:backl 2:51 3:52 4:53 5:54 6:55 7:56 8:57 9:PCT90 10:PCT91 11:PCT92 12:PCT93 13:PCT94 14:PCT95 15:PCT96

Statistics: Mean 8.845; Variance 4.678; scale 1.891

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

																			波
19	18	17	16	15	14	13	12	11	10	ص	œ	7	თ	ഗ	4	· w	2	μ.	Result
69	69	84	99	103	221	257	303	303	304	354	372	381	383	474	514	514	514	514	Score
5.3	ω	6.5	7.6	7.9	17.0	19.8	23.3	23.3		27.2	28.6	29.3	29.4	36.4	39.5	39.5	39.5	39.5	Query Match
654	534	7218	138	138	462	477	4283	4283	2771	474	372	501	504	600	6889	6889	2175	2062	Length
o.	σ	7	ഗ	v	7	7	7	7	7	7	7	7	7	7	14	σ	7	7	B .
US-08-187-	8	US-08-232-	US-08-086-	US-08-086-	US-08-050-	US-08-050-	US-08-445-	US-08-343-	US-08-273-	US-08-050-	US-08-050-	US-08-050-	US-08-050-	US-08-050-	PCT-US95-0	US-08-286-	US-08-321-	us-08-050-	Ħ
Sequence 1,	Sequence 3,	Sequence 14	Sequence 1,	Sequence 2,	Sequence 51	Sequence 53	Sequence 1,	Sequence 3,	Sequence 5,	Sequence 49	Sequence 3,	Sequence 1,	Sequence 56	Sequence 47	Sequence 2,	Sequence 2,	Sequence 1,	Sequence 24	Description
Applicatio	Applicatio	, Applicati	Applicatio	Applicatio	, Applicati	, Applicati	Applicatio	Applicatio	Applicatio	•	Applicatio	Applicatio	, Applicati	, Applicati	Applicatio	Applicatio	Applicatio	, Applicati	
9.66e-32	9.66e-32	1.00e-42	6.30e-54	6.08e-57	1.21e-148	3.56e-177	7.97e-214	7.97e-214	1.27e-214	1.22e-254	4.39e-269	2.60e-276	6.44e-278	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	Pred. No.

ဂ	ი																ი	ი							
45	44	43	42	41	40	39	38	37	36	35 5	34	ယ	32	31	30	29	28	27	26	25	24	23	22	21	20
26	26	26	30	32	32	32.	36	36	36	36	36	36	36	36	36	38	41	42	52	52	52	52	59	59	59
2.0	2.0	2.0	2.3	2.5	2.5	2.5	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.9	3. <b>2</b>	3.2	4.0	4.0	4.0	4.0	4.5	4.5	4.5
	105		33			196									4810	633	7218	215	2248	2248	2248	2248	597	321	321
			7	0		<b>ب</b> سو									7	-	7	σ	7	σ				σ	
US-08-273-	US-07-865-	PCT-US95-1	us-08-050-	US-08-239-	US-08-238-	5177193-2	PCT-US93-0	US-08-453-	US-08-453-	PCT-US93-0	US-08-188-	PCT-US95-0	PCT-US93-0	PCT-US94-0	US-08-453-	US-08-388-	US-08-232-	US-08-238-	US-08-475-	US-08-369-	US-08-780-	US-08-636-	US-08-187-	-80-	US-07-920-
Sequence	Sequence		Sequence		Sequence	Patent No.						Sequence	Sequence	Sequence	Sequence						Sequence				Sequence
1, 1	13,	94,	14,	1, 1	5, 2		9, ,	9, ,	11,	•	ω ~	3, 2	7, 1	3, ~	7, 7		-	5, 2		1, ,	1, ,	1, 7	2, 1	23,	23,
0	_	μ.	Applicati	-	tio	5177193.	Applicatio	Applicatio	Applicat1	Applicati	Applicatio	Applicatio	Applicatio	Applicatio	Applicatio	Applicatio	Applicati	Applicatio	Applicatio	Applicatio	Applicatio	Applicatio	Applicatio	Applicati	Applicati
5.44e-03	5.44e-03	5.44e-03	2.53e-05	1.56e-06	1.56e-06	1.56e-06	4.97e-09	2.61e-10	2.91e-12	6.38e-13	1.08e-19	1.08e-19	1.08e-19	1.08e-19	1.37e-24	1.37e-24	1.37e-24								

## ALIGNMENTS

RESULT US-08-050-319B-24 STANDARD; DNA; UNC; 2062 BP

XXXXX

01-JAN-1900

Sequence 24, Application US/08050319B

Sequence 24, Application US/08050319B Patent No. 5633145

GENERAL INFORMATION:

NUMBER OF SEQUENCES: 5 APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor

STREET: 635 Bryant CITY: Palo Alto STATE: California ADDRESSEE: 635 Bryant Street Reed & Robbins

ZIP: 94301
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk COUNTRY: USA

COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA: version #1.25

APPLICATION NUMBER: US/08/050,319B FILING DATE: 10-May-1993 CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:
NAME: ROBBINS, ROBERTA L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 51: TELEPHONE: (415) 617-8999 5150-0030

TELEFAX: (415) 327-3231 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:

Suite

```
Q
                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8888888888
                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                 &
                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                  ä
                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: CDNA to mRNA
FEATURE:
NAME/KEY: CDS
LOCATION: 155..1519
Sequence 2062 BP; 429 A; 617 C;
                                                                                Sequence 1, Patent No.
                                                                                                        Sequence 1, Application US/08321668
                                                                                                                         01-JAN-1900
                                                                                                                                                                 US-08-321-668-1
            GENERAL INFORMATION:

APPLICANT: WALLACH, David

APPLICANT: BRAKEBUSCH, Cord

APPLICANT: VARFOLOMEEV, Eugene

APPLICANT: VARFOLOMEEV, Eugene

APPLICANT: BATKIN, Michael

TITLE OF INVENTION: MOLECULES INFLUENCING THE SHEDDING

TITLE OF INVENTION: THE THE RECEPTORS, THEIR PREPARATION

NUMBER OF SEQUENCES: 42

CORDESCENCEMER ADDRESS: 42
                                                                                                                                                                                                                                                                                                                                                                                                                                  405
                                                                                                                                                                                                                                                                                                                                                                                                                                                  335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  345
                                                                                                                                                                                                 825
                                                                                                                                                                                                                                                  695
                                                                                                                                                                                                                                                                                635
                                                                                                                                                                                                                                                                                                 645
                                                                                                                                                                                                                                                                                                                  575
                                                                                                                                                                                                                                                                                                                                 585
                                                                                                                                                                                                                                                                                                                                                  515
                                                                                                                                                                                                                                                                                                                                                                  525
                                                                                                                                                                                                                                                                                                                                                                                  455
                                                                                                                                                                                                                                                                                                                                                                                                  465
                                                                                                                                                                                                                                                                                                                                                                                                                  395
                                                                                                                                                                                                                 755
                                                                                                                                                                                                                                 765
                                                                                                                                                                                                                                                                  705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 275 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
        CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                               AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT 574
                                                                                                                                                                                                                                                                                                                                                                                               TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 454
                                                                                                                                                                                                                                                                         AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 2062 base pai
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                                                                                                                                                                         N
                                                                                                                                                                                                ### AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                               TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCCTACCCCCAGATTGAG
                                                                                                                                                                                                                                                                                                          TTCCAGTGCTTCAATTGCAGCCTCTGCCTCCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                AATGTTAAGGGCACTGAGGACTCAGGCACCACAG 788
                                                                                                                                                                                                                                                                                                TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                ch 39.5%;
l Similarity 100.0%;
514; Conservative
                                                                                 , Application 5665859
                                                                                                                                                                 STANDARD; DNA; UNC; 2175
BROWDY AND NEIMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  base pairs
                                                                                        US/08321668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 514; DB 7; Length 2062; Pred. No. 0.00e+00; 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                573 G; 443 T; 0 other;
                                                                                                                                                                                                 858
                       PREPARATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                        AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                               704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 404
                                                                                                                                                                                                                                                                764
                                                                                                                                                                                                                                                                                                                634
                                                                                                                                                                                                                                                                                                                                644
                                                                                                                                                                                                                                                                                                                                                                584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                      밁
                                    Š
                                                      밁
                                                                     ğ
                                                                                     밁
                                                                                                     Š
                                                                                                                       밁
                                                                                                                                     ğ
                                                                                                                                                       밁
                                                                                                                                                                     Ş
                                                                                                                                                                                       밁
                                                                                                                                                                                                    ş
                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                        999999999999999999999999999999999999
       765
                       796
                                       705
                                                                       645
                                                                                       676
                                                                                                       585
                                                                                                                       616
                                                                                                                                       525
                                                                                                                                                       556
                                                                                                                                                                        465
                                                                                                                                                                                        496
                                                                                                                                                                                                                        436
```

```
Query Match
Best Local Simi:
Matches 514;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER: 25,618
REFERENCE/DOCKET NUMBER: WALLA
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-628-5197
TELEFAX: 202-737-3528
TELEFAX: 202-737-3528
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 2175 base pairs
TYPE: nucleic acid
GER ANDERSEG: 4611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: CDS
LOCATION: 256..1620
Sequence 2175 BP; 474 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Patentin Release #1.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/321,6
FILING DATE: 12-OCT-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: IL 107268
FILING DATE: 12-OCT-1993
ATTORNEY/AGENT INFORMATION:
NAME: BROWDY, ROGEL L.
REGISTRATION NUMBER: 25,618
REFERENCE //OVERT WINDER: 25,618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             376 GATAGTGTGTGTCCCCAAGGAAAATATATCCCACCCTCAAAATAATTCGATTTTGCTGTACC 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  405 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    345 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                 TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                  TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                        TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                           CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                               AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET: 419 Seve
CITY: Washington
STATE: D.C.
TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                          CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                           AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    h 39.5%;
Similarity 100.0%;
514; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   419 Seventh Street,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         641 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08/321,668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Release #1.0, Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 514; DB 7;
Pred. No. 0.00e+00;
0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           604 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Z.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         456 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 2175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          495
                                                                                                                                                                                                                                                                                                                                                                                                                                524
                                        855
                                                                                                                        795
                                                                                                                                                                                                        735
                                                                                                                                                                                                                                                       644
                                                                                                                                                                                                                                                                                                 675
                                                                                                                                                                                                                                                                                                                                                                                   615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  464
                                                                                764
                                                                                                                                                                    704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

644

2024

584

2144

704 2084

764

824

```
õ
                                     В
                                                         Š
                                                                                   밁
                                                                                                      Ş
                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
ID US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                  Query Match
Best Local :
                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                         REGISTRATION NUMBER: 798
REFERENCE/DOCKET NUMBER: 798
TELECOMUNICATION INFORMATION:
TELEPHONE: 415/225-1994
TELEPAS: 415/952-9881
TELEERS: 910/371-7168
INFORMATION FOR SEQ ID NO: 2:
                                                                                                    STRANDEDNESS: double
TOPOLOGY: linear
Sequence 6889 BP; 1729 A; 1826 C; 1681 G; 1653 T; 0 other;
                        1845 TGCAGGGAGTGTGAGAGCGGCTCCCTCACACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                     1785 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 1844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 2, Application US/08286740 Patent No. 5561053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-286-740-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 2, Application US/08286740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION: APPLICANT: Crowle
                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08,
FILING DATE: 05-AUG-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           856 AATGTTAAGGGCACTGAGGACTCAGGCACCACAG 889
                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PAtin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Crowley, TITLE OF INVENTION: TITLE OF INVENTION:
                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 94080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATGTTAAGGGCACTGAGGACTCAGGCACCACAG 858
                                                           AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
            TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                             NAME: Lee, Wendy M.
                                                                                                                                                                                                                                                 LENGTH: 6889 bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                    h 39.5%;
Similarity 100.0%;
514; Conservative
                                                                                                                                                                                                                                     nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genentech,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craig W. METHOD FOR SELECTING HIGH-EXPRESSING HOST CELLS
                                                                                                                                                                                                                                                                                                                                                                                                                                           US/08/286,740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA;
                                                                                                                                                                Score 514; DB 6;
Pred. No. 0.00e+00;
                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 UNC; 6889
                                                                                                                                                    Mismatches
                                                                                                                                                      0
                                                                                                                                                                         Length 6889;
                                                                                                                                                   Indels 0;
                                                                                                                                                  Gaps
                                   1904
                                                          464
            524
                                                                                                                                                    0
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
       FILING DATE: 05-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Lee, Wendy M.
REGISTRATION NUMBER: 00,000
REFERENCE/DOCKET NUMBER: 798P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/952-9881
TELEFAX: 415/952-9881
TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 6889 bases
LENGTH: 6889 bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1965
                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 2, Application PC/TUS9509576 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2205 AATGTTAAGGGCACTGAGGACTCAGGCACCACAG 2238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1905 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  XXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PCT-US95-09576-2 STANDARD; DNA; UNC; 6889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 2, Application PC/TUS9509576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   765
                                                                                                                                                                                                            SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US9
                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch,
                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION:
                                                                                                                                                                         CLASSIFICATION:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS: ADDRESSEE: Genentech,
                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                 OPERATING SYSTEM: PC-DOS/Ms-mare: nati-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCCTACCCCCAGATTGAG 2204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                 APPLICATION NUMBER: 08/2
                                                                                                                                                                                                                                                                                                                                 STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AMACAGAACACCGTGTGCACCTGCCATGCAGGTTTCTTCTAAGAGAAAACGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCCTACCCCAGATTGAG
STRANDEDNESS:
                                                                                                                                                                                                                                                                                               94080
                                                                                                                                                                                                                                                                                                                       California
                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                       GENENTECH, INC.
double
                                                                                                                                                                                                                                                                                                                                                                                              HOST CELLS
                                                                                                                                                              08/286740
                                                                                                                                                                                                            PCT/US95/09576
                                                                                                                                                                                                                                                                                                                                                          Inc.
                                                                                                     798PCT
                                                                                                                                                                                                                                                                                                                                                                                                         SELECTING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ВP
```

HIGH-EXPRESSING

```
RESULT
ID U
                                                                                                                                                                                                                                                                                                                                         ğ
                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
လ
                                                                                                                                                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1845
                                                                                                                                                                                     Sequence 47, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                    Sequence 47, Application US/08050319B
                                                                                                                                                                                                                                           01-JAN-1900
                                                                                                                                                                                                                                                                XXXXX
                                                                                                                                                                                                                                                                                              US-08-050-319B-47 STANDARD; DNA; UNC; 600
                                                                                                                                                                                                                                                                                                                                                               2205
                                                                                                                                                                                                                                                                                                                                                                                                        2145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                   2085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               405
                                                                                                                                                                                                                                                                                                                                          825
                                                                                                                                                                                                                                                                                                                                                                                    765
                                                                                                                                                                                                                                                                                                                                                                                                                               705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  585
                                                                                                                                                                           GENERAL INFORMATION:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                     APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. TUTNET, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Recepto:
NUMBER OF SEQUENCES: 57
                                                                                                           NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 1904
                                                                                                                                                                                                                                                                                                                                                                                                                         AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 1844
                                                                  CITY: Palo Alto
STATE: California
                                                                                      STREET:
                                                                                                                                                                                                                                                                                                                                                     AATGTTAAGGGCACTGAGGACTCAGGCACCACAG 2238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear
ince 6889 BP; 1729 A; 1826 C; 1681 G; 1653 T; 0 other;
                                               ZIP: 94301
                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                         AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                                                                                                                                                                                 TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGACACCGTGTGGGTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  514;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                h 39.5%;
Similarity 100.0%;
514; Conservative
                                                                                       E: Reed & Robbins
635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 514; DB 14;
Pred. No. 0.00e+00;
0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                         858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 6889;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1964
                                                                                                                                                                                                                                                                                                                                                                                                       2204
                                                                                                                                                                                                                                                                                                                                                                                                                                                2144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             464
                                                                                                                                                                                                                                                                                                                                                                                                                           764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

\*\*\*\*\*\*\*

01-JAN-1900

Sequence 56,

Application US/08050319B

Sequence 56, Application US/08050319B Patent No. 5633145

```
RESULT
ID US
                                                 Ş
                                                                         밁
                                                                                              ş
                                                                                                                        밁
                                                                                                                                              Š
                                                                                                                                                                           밁
                                                                                                                                                                                               Š
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36.4%;
Best Local Similarity 99.4%;
Matches 477; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 4
SEQUENCE CHARACTERISTICS:
LENGTH: 600 base pairs
TYPE: nucleic acid
STEANDENNESS: 60161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 600 BP; 148 A; 157 C; 162 G; 133 T; 0
US-08-050-319B-56
                                                                                                                                                                                                                                                                                                                                                                                                                121 GATAGTGTGTGTCCCACAGGAAAATATATCCACCCTCAAAATAATTCGATTTTGCTGTACC 180
                                                 765
                                                                        541
                                                                                                 705
                                                                                                                        481
                                                                                                                                                 645
                                                                                                                                                                         421
                                                                                                                                                                                                  585
                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                   525
                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                   465
                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                     405
                                                                                                                                                                                                                                                                                                                                                               181 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 240
                                                                                                                                                                                                                                                                                                                                                                                                     345 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Robbins, Roberta L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION: NAME: Robbins, Roberta L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                                                              TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTTAG
            σ
                                                                                                              AAACAGAACACCGTGTGTGCACCTGCCATGCAGGTTTTCTTAGAGAGAAAACGAGTGTGTCT
                                                                                                                                              TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                            TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                         CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                  TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: CDS
LOCATION: 1...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 10-May CLASSIFICATION: 43
                                                 TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                   TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                   AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PatentIn Release #1.0, version
STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-May-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cDNA to mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          327-3231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/08/050,319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 474; DB 7;
Pred. No. 0.00e+00;
0; Mismatches 3
DNA;
UNC;
504
₽₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                      3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 600;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                   524
                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                   404
                                                                       600
                                                                                               764
                                                                                                                        540
                                                                                                                                                 704
                                                                                                                                                                        480
                                                                                                                                                                                                 644
                                                                                                                                                                                                                                                  584
                                                                                                                                                                                                                                                                                                                                                   464
```

```
Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 435
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: RODDINS, RODERTA L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: CDS
LOCATION: 1..501
Sequence 504 BP; 122 A; 137 C; 138 G; 107 T; 0 other;
                                                                                                                                                                                                                                                                               121 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 56:
SEQUENCE CHARACTERISTICS:
LENGTH: 504 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                Match 29.4%;
Local Similarity 100.0%;
les 383; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: cDNA to mRNA FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
CORRESPONDENCE ADDRESS:
ADDRESSEE: Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Reed of STREET: 635 Bryan CITY: Palo Alto
                                                                                                                                AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 300
                                                                                                                                                                                                                               TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: UZIP: 94301
             AAACAGAACACCGTGTGCACCTG 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: double
                                                                                     CGGGACACCGTGTGGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                           Score 383; DB 7; L
Pred. No. 6.44e-278;
                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                       Length 504
                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                           420
                                                                                                                                                         360
                                                                                    644
                                                                                                                                   584
                      Ş
                                               밁
                                                                     ğ
                                                                                                                    Ω
                                                                                                                                                                                                                     RESULT
ID US
밁
                                                                                              밁
301
                       465
                                                                       405
```

밁 δÃ 밁 Ş

361 525 301 465 241 405 181

문 Ş В Š

421

S

밁

ş

Matches

밁

```
Query Match 29.3%;
Best Local Similarity 100.0%;
Matches 381; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: CDS
LOCATION: 1..501
Sequence 501 BP; 121 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-050-319B-1 STANDARD; DNA; UNC; 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEPHAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
TENCRU: 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                            181 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGCCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-MAY-1993
CLASSIFICATION: 4.35
ATTORNEY/AGENT INFORMATION:
NAME: ROBDINS, ROBERTA L.
REGISTRATION NUMBER: 33,208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Floppy disk
COMPUTER: CYMPUTER: COMPUTER: CYMPUTER: CYMPU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 5
                                                 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                       TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                    AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                          TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 94303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 501 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; 137 C; 137 G; 106 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 381; DB 7; L
Pred. No. 2.60e-276;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 501;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                240
584
                                                                                                                                                                          524
                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                           464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
ID U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                            Query Match 28.6%;
Best Local Similarity 100.0%;
Matches 372; Conservative
                                                                Sequence 372
                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 3, Application Patent No. 5633145
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-050-319B-3 STANDARD; DNA; UNC; 372 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  XXXXX
                                                                                                                                              TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 705
                                                                                                                                                                                           APPLICATION NUMBER: US/08/050,319B FILING DATE: 10-May-1993 CLASSIFICATION: 435 ATTORNEY/AGENT INFORMATION: NAME: ROBBINS, ROBERT L. REGISTRATION NUMBER: 33,208 REFERENCE/DOCKET NUMBER: 5150-0030
                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                            FEATURE:
                                                                                                     MOLECULE TYPE:
                                                                                                                                                                                                                                                       SOFTWARE: Patentin Release #1.0, version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: CORRESPONDENCE ADDRESS:
GTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACCAAGTGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAAACCTT 420
                                                            NAME/KEY: CDS
LOCATION: 1..372
ence 372 BP; 98 A; 102 C; 95 G; 77 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAACAGAACACCGTGTGCACC 501
                                                                                                          TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                 CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAACAGAACACCGTGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                   STREET:
                                                                                                                                         LENGTH:
                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                94301
                                                                                                                                                                                                                                                                                                                                                                                                                                    , Application US/08050319B
5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/08050319B
                                                                                                                                     372 base pairs
                                                                                                                                                                                                                                                                                                                                                 635 Bryant Street
                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                            Reed & Robbins
                                                                                                   DNA (genomic)
                            Score 372; DB 7; Le
Pred. No. 4.39e-269;
0; Mismatches 0;
                                             Length 372;
                            Indels
                            0
                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  704
                            0
 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                    US-08-050-319B-49 STANDARD; DNA; UNC; 474 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  591
                                                                                                                                                                                                                                                                                                      GENERAL
                                                                                                                                                                                         ZIP: 94301
                                                                                                                                                                                                   COUNTRY:
```

```
711 AACACCGTGTGC 722
                                                                                                                            301 TGCTTCAATTGCAGCCTCTGCCTCCAATGGGACCGTGCACCTCTCCTGCCAGGAGAAACAG
                                                                                                                                                                                                                                                                                                                                         181 TCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGACCGGGAC
                                                361 AACACCGTGTGC 372
                                                                                                                                                                                                                                     241 ACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTTTTCCAG
                                                                                                                                                                                                                                                                                                                                                                                                               471 GAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTCAGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                             121 GAGTGTGAGAGCGGCTCCATCACCGCTTCAGAAAACCACCTCAGACACTGCCTCAGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        411 CACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGACTGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            351 GTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACCAAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGACTGCAGG
                                                                                                 TGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAGAAACAG
                                                                                                                                                                                                          ACCGTGTGTGCGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTTTTCCAG
                                                                                                                                                                                                                                                                                                           TCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGACCGGGAC
                                                                                                                                                       360
                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                           590
                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                    530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            410
                                                                                                                                                                                                          650
```

Sequence 49, Application US/08050319B Patent No. 5633145 01-JAN-1900 Sequence 49, Application US/08050319B APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor CORRESPONDENCE ADDRESS NUMBER OF SEQUENCES: CITY: Palo Alto STATE: California STREET: ADDRESSEE: INFORMATION: 635 Bryant Street Reed & Robbins

USA

TELEFAX: (415) 327-32: INFORMATION FOR SEQ ID NO: ATTORNEY/AGENT INFORMATION:
NAME: ROBOTIS, ROBERTS 1.08
REGISTRATION NUMBER: 31.208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999 SEQUENCE CHARACTERISTICS: LENGTH: 474 base pairs COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA: COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy of COMPUTER: IBM PC com-APPLICATION NUMBER: US/08/050,319B FILING DATE: 10-May-1993 CLASSIFICATION: 435 STRANDEDNESS: nucleic acid Floppy disk 327-3231

```
RESULT
ID US
                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                               80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ពន្ធន្ធន្ធន្ធ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                        Sequence 5, Application US/08273411 Patent No. 5625124
                                                                                                                                                                                                                                                                         Sequence 5, Application US/08273411
                                                                                                                                                                                                                                                                                                 01-JAN-1900
                                                                                                                                                                                                                                                                                                                       XXXXXX
                                                                                                                                                                                                                                                                                                                                                         US-08-273-411-5 STANDARD; DNA; UNC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCATION: 1..471
Sequence 474 BP; 110 A; 126 C; 132 G; 106 T; 0 other;
                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Falk,
APPLICANT: Gordon
                                                                                                                                                                                                                                                                                                                                                                                                         815
                                                                                                                                                                                                                                                                                                                                                                                                                             465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  165 ACACTGCCTCAGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTG 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   455 GGATACGGACTGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAAACCACCTCAG 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         105 GGACAGGGAGAGAGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAG 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                    755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match 27.2%;
Local Similarity 97.8%;
tes 362; Conservative
                 COUNTRY: USA

ZIP: 30309-4530

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PATENTIN Release #1.0, Version

CURRENT APPLICATION DATA:
                                                                                                                                                    APPLICANT: Gordon, Jeffrey I.
TITLE OF INVENTION: Animal Model
TITLE OF INVENTION: Disease
NUMBER OF SEQUENCES: 10
CORRESSPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                        CCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                 CCAGATTTAG 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGAAAACCTTTTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTC 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACAGTGGACCGGGACACCGTGTGTGGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAG 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACACTGCCTCAGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTG 574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGAGTGTGTCTCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACC 464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Atlanta
STATE: Georgia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGAAAACCTTTTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACAGTGGACCGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: CDS
LOCATION: 1..
                                                                                                                                   STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
        APPLICATION NUMBER:
                                                                                                                                            ADDRESSEE:
                                                                                                           Georgia
                                                                                                                                 1100 Peachtree Street,
                                                                                                                                                                                                                 Falk, Per
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                        824
                                                                                                                                             Patrea L. Pabst
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA to mRNA
        US/08/273,411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 354; DB 7; L
Pred. No. 1.22e-254;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                         2771
                                                                                                                                 Suite 2800
                                                                                                                                                                                           for Gastro-Intestinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 474
                               #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                   814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
δÃ
                                                           밁
                                                                           δ.
                                                                                                밁
                                                                                                                  ğ
                                                                                                                                                        δÃ
                                                                                                                                                                             밁
                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                              밁
                                                                                                                                       밁
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                      Query Match 23.4%;
Best Local Similarity 97.9%;
Matches 331; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: PADST, PATICAL:
REGISTRATION NUMBER: 31,284
REFERENCE//OCKET NUMBER: 4010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (404) 815-6508
TELEPHONE: (404) 815-6555
INFORMATION FOR SEO ID NO: 5:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                            PAGES: 5553-5561
DATE: 1986
RELEVANT RESIDUES IN SEQ ID NO:
Sequence 2771 BP; 666 A; 718 C; 704 C
                                                                                                                                                                                              307
                    976
                                       247
                                                           916
                                                                             187
                                                                                                856
                                                                                                                    127
                                                                                                                                       798
                                                                                                                                                                                                                                                                                                                  PUBLICATION INFORMATION:
AUTHORS: Sweetser, et al.
JOURNAL: J. Biol. Chem.
VOLUME: 261
                                                                                                                                                                                                                                                                                                                                                                                                                    PUBLICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PUBLICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
GCCTGCTCTGCCTGCCTTGGCTTCAAGAGGGCAGTGCC 1013
                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS:
JOURNAL:
VOLUME:
                                                                                       GGAGAGAGAAAAAAAAAACAGCTCCTGGAGCAGGGAGAGTGCTGGCCTCTTTGCTCTCCGGC
                                                                                                                  TATCGCCATGTAAGCCCAGTATTTGGCCAATGTCAGAAAGCTCCTGGTCCCTGGAGGGAT 186
                                                                                                                              TATCGCCATGTAAGCCCAGTAT--GGCCAATCTCAGAAAGCTCCTGGTCCCTGGAGGGAT
                                                TCCCTCTGTTGCCCTCTGGTTTCTCCCCAGGCTCCCGGACGTCCCTGCTCCTGGCTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS:
JOURNAL:
                                                                             GGAGAGAAAAAACAACACCTCCTGGAGCAGGGAGAGTGCTGCCCTCTTGCTCTCCGGC
                                                                                                                                                                                                                                                                                                                                                                           PAGES:
                                       TCCCTCTGTTGCCCTCTGGTTTCTCCCCAGGCTCCCGGACGTCCCTGCTCCTGGCTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                PAGES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: doub
                                                                                                                                                                                                                                                                                                                                                         RELEVANT RESIDUES IN SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                             RELEVANT RESIDUES IN SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           VOLUME:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                                                                                                                                                                                                                                                                                                                5: 239-249
1982
                                                                                                                                                                                                                                                                                                                                                                                                                                        1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                1318-1332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2771 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                                                                                                                                                                                                                                                                        Seeburg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sweetser, et al
Genes & Dev.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       double
                                                                                                                                                                                                                                                                                                                                                                                                          et al
                                                                                                                                                                                                                                               Score 304; DB 7; Li
Pred. No. 1.27e-214;
                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                             Ħ
                                                                                                                                                                                                                                                                                                                                                         ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MU106
                                                                                                                                                                                                                                                                             704 G;
                                                                                                                                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                              ŏ.
                                                                                                                                                                                                                                                                            5: FROM 1 TO 617
3; 683 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                         <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                             5:
                                                                                                                                                                                                                                                                                                                                                         FROM 620 TO
                                                                                                                                                                                                                                                                                                                                                                                                                             FROM 561 TO
                                                                                                                                                                                                                                       3; Indels
                                                                                                                                                                                                                                                        Length 2771;
                                                                                                                                                                                                                                       4.
                                                                                                                                                                                                                                       Gaps
                                                                           246
                                                                                                                                      855
                                                          975
                                                                                               915
```

Ŋ

RESULT ID US

US-08-343-401A-3

STANDARD;

DNA;

UNC;

```
Ş
                       밁
                                          5
                                                                  밁
                                                                                                                                     Query Match 23.3%;
Best Local Similarity 95.6%;
Matches 323; Conservative
                                                                                                                                                                                                                                                                                                                           IELERAX: 608-251-9166
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 4283 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/343,401A
FILING DATE: 22-NOV-1994
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Seay, Nicholas J
REGISTRATION NUMBER: 27,386
PRESSTANCE NUMBER: 27,386
                                                                                                                                 Sequence 4283 BP; 1023 A; 1095 C; 1114 G; 1051 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 3, Application US/08343401A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JAN-1900
                                                        713 ATGGCTACAGGTAAGCGCCCCTAAAATCCCCTTTGG-CACAATGTGTCCTGAGGGGAGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No.
          772 CAGCGACCTGTAGATGGGACGGGGGCACTAACCCTCAGGGTTTGGGGTTCTGAATGTGAG 831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL
  67
                                              7
                                                                                                                                               FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Swain, William F
APPLICANT: Macklin, Michael D
APPLICANT: Eriksson, Elof
APPLICANT: Andree, Christophe
TITLE OF INVENTION: Improved Wound Healing
NUMBER OF SEQUENCES: 4
                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
TELEPHONE: 608-251-5000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                         MOLECULE TYPE:
                                                                                                                                                                                                                                                                                              IMMEDIATE SOURCE:
                                                                                                                                                                                NAME/KEY:
CAGCGACCTGTAGATGGGACGGGGGCACTAACCCTCAGGTTTGGGGGCTTCTGAATGTGAG
                                           ATGGCTACAGGTAAGCGCCCCTAAAATCCCTTTGGGCACAATGTGTCCTGAGGGGAGAGG
                                                                                                                                                                                                                 LOCATION:
                                                                                                                                                                                                                                                  LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: USA
ZIP: 53701-2113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                            NAME/KEY:
                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION:
                                                                                                                                                                                                                                                                                  pwRG1630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/08343401A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PO Box 2113
                                                                                                                                                                                                               exon
981..1253
                                                                                                                                                                                            CDS
                                                                                                                                                                                                                                                exon
713..721
                                                                                                                                              sig_peptide
713..1049
                                                                                                                                                                                                                                                                                                                 circular
                                                                                                                                                                               join(713..721,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Quarles & Brady
                                                                                                                                                                                                                                                                                                       DNA (genomic)
                                                                                               Score 303; DB 7; L
Pred. No. 7.97e-214;
                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                      11-229-9103-9
                                                                                                                                                                                981..1253)
                                                                                       Mismatches 14; Indels
                                                                                                           Length 4283;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #1.30
                                                                                     ۲.
                                                                                     Gaps
                                           66
                                                               771
                                                                                      ۳.
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 12
ID US-08-445-265A-1 STANDARD; DNA; UNC; 4283
           Query Match
Best Local S
 Matches
                                               LOCATION: jo
Sequence 4283 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Application US/08445265A Patent No. 5697901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1012 GCCTGCTCTGCCTGCCTGCCTTCAAGAGGGCAGTGCC 1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1, Application US/08445265A
                                                                                                                                                                 TELEFAX: 608-251-9166
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        187 GGAGAGAAAAACAACCTCCTGGAGCAGGGAGAGTGCTGCCCTCTTGCTCTCCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           247 TCCCTCTGTTGCCCTCTGGTTTCTCCCCAGGCTCCCGGACGTCCCTGCTCCTGGCTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 892 GGAGAGAAAAAACAAACAGCTCCTGGAGCAGGGAGAGTGTTGGCCTCTTGCTCTCCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              832 TATCGCCATCTAAGCCCAGTATTTGGCCAATCTCAGAAAGCTCCTGGCTCCCTGGAGGAT
                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/445, 26
                                                                                                                                                                                          TELECOMMUNICATION INFORMATION:
TELEPHONE: 608-251-5000
TELEFAX: 608-251-9166
                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Seay, Nicholas J
REGISTRATION NUMBER: 27386
REFERENCE/DOCKET NUMBER: 1:
                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE: Floppy
                                                                                             MOLECULE TYPE: other nucleic acid DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Eriksson, TITLE OF INVENTION:
                                                                                                                                                                                                                                                                              FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCTGCTCTGCCTGCCTTGGCTTCAAGAGGGCAGTGCC 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               recererrecerrerreceesageerecegaegreeerecergeerrer
                                                                                                                     TOPOLOGY: circular
                                                                                                                               TYPE: nucleic acid
STRANDEDNESS: double
                                                                      NAME/KEY: CDS
                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Madison
                                                                                                                                                       LENGTH: 4283 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
           1 23.3%; Similarity 95.6%;
                                                                                                                                                                                                                                                                                                                                                                                        53703
                                                                                                                                                                                                                                                                                                                                                                                                                ΣH
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                      1 South Pinckney Street
                                                                                                                                                                                                                                                                                                                                                                                                     SD
                                           join(713..721, 981..1250)
>; 1023 A; 1095 C; 1114 G; 1051 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Quarles & Brady
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENE DELIVERY BY MICRONEEDLE INJECTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Elof
                                                                                                                                                                                                                                                                                                                            Release #1.0, Version
                                                                                                                                                                                                                                                                                                       US/08/445,265A
           Score 303; DB 7; L
Pred. No. 7.97e-214;
                                                                                                                                                                                <u>..</u>
                                                                                                                                                                                                                               110229.91080
 Mismatches
                      Length 4283;
Indels
۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         246
ŗ
```

```
RESULT
ID US
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEPAX: (415) 327-3331
INFORMATION FOR SEQ ID NO: 53:
SEQUENCE CHARACTERISTICS:
LENGTH: 477 base pairs
                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Robbins, Roberta L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 53, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-050-319B-53 STANDARD; DNA; UNC; 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 53, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 772 CAGCGACCTGTAGATGGGACGGGGGCACTAACCCTCAGGGTTTGGGGTTCTGAATGTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            713 ATGGCTACAGGTAAGCGCCCCTAAAATCCCTTTGG-CACAATGTGTCCTGAGGGGAGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         67
                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
CORRESPONDENCE ADDRESS:
        TYPE: nucleic
STRANDEDNESS:
TOPOLOGY: lin
                                                                                                                                                                                                                                                                                                                   CITY: Palo Alto
STATE: California
COUNTRY: USA
ZIP: 94301
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCTGCTCTGCCCTGCCTTCAAGAGGGCAGTGCC 1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCCTCTGTTGCCCTCTGGTTTCTCCCCAGGCTCCCGGACGTCCCTGCTCCTGGCTTTTG 1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGAGAAAAACAAACAGCTCCTGGAGCAGGGAGAGTGTTGGCCTCTTGCTCTCCGGC 951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATCGCCATCTAAGCCCCAGTATTTGGCCAATCTCAGAAAGCTCCTGGCTCCCTGGAGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGCGACCTGTAGATGGGACGGGGCACTAACCCTCAGGTTTGGGGGCTTCTGAATGTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGGCTACAGGTAAGCGCCCCTAAAATCCCTTTGGGCACAATGTGTCCTGAGGGGAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCTGCTCTGCCTGCCTTCAAGAGGGCAGTGCC 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCCTCTGTTGCCCTCTGGTTTCTCCCCAGGCTCCCGGACGTCCCTGCCTCCTGGCTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGAGAAAAACAACCTCCTGGAGCAGGGAGAGTGCTGCCCTCTTGCTCCCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TATCGCCATGTAAGCCCAGTATTTGGCCAATGTCAGAAAGCTCCTGGTCCCTGGAGGGAT 186
                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nucleic acid
                                                                                                                                                             Robbins, Roberta L.
                                                                                                                                                                                                                                                                                                                                                                        635 Bryant Street
            linear
                                                                                                                                                                                                                                                                                                                                                                                        Reed & Robbins
CDNA to mRNA
                           double
                                                                                                                                      5150-0030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         771
```

```
ន្តន្តន្ត
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
ID U
  S
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 259;
                                                                                                                                                                                                                                                                                                                                                                                    Patent No.
GENERAL IN
                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 51, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-050-319B-51 STANDARD; DNA; UNC; 462 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 477 BP; 117 A; 122 C; 131 G; 107 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 51, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            XXXXXX
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEPAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 51:
SEQUENCE CHARACTERISTICS:
                                                             SOFTWARE: Patentin Release #1.0, ver:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: ROBDINS, ROBERTA L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 GATAGTGTGTGTCCCCAAGGAAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: Reed & Robbins
                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY:
                                                                                                                                                                                                                                                                     STREET:
CITY: P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGACACCGTGTGTACCTGC 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATAGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                           MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                          CITY: Palo Alto
STATE: California
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGACACCGTGTGTGGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19.8%;
Similarity 99.2%;
                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                 94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                 635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 257; DB 7; I
Pred. No. 3.56e-177;

 Mismatches

                                                                                                                                                                   version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 477;
                                                                                                                                                                                                                                                                                                                                   Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      584
```

```
RESULT
ID US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          នននិននិនិនិន
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                               Patent No. 544167

GENERAL INFORMATION:
APPLICANT: Pettersson, Kim SI
TITLE OF INVENTION: Variant Luteinizing Hormone Encoding DNA
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
Address Mastriani, Schaumberg & Schill
                                              COUNTRY: U.S.A.

COUNTRY: U.S.A.

ZIP: 20036

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/086,915

FILING DATE: 07-JUL-1993

CLASSIFICATION: 536

ATTORNEY/AGENT INFORMATION:

NAME: KUBOYCIK, Ronald J.

REFERENCE/DOCKET NUMBER: 15873005

TELECOMMUNICATION INFORMATION:

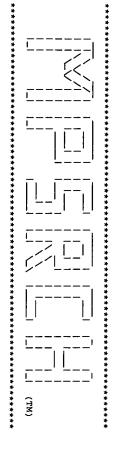
TELEPHONE: 202-467-6300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: CDS
LOCATION: 1..459
Sequence 462 BP; 116 A; 119 C; 121 G; 106 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 2, Application US/08086915 Patent No. 5444167
                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 2, Application US/08086915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-086-915-2 STANDARD; DNA; UNC; 138
TELEFAX: 202-466-2006 INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS: LENGTH: 138 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             420 GAAAAGCCTGGAGTGCACGAAGTTGTGCCCTACCCCAGATTTAG 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360 CACCTGCCATGCAGGTTTCTTTCTAAGAGAAAACGAGTGTGTCTCCCTGTAGTAACTGTAA 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          662 CAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAGAAACAGAACACCGTGTG 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300 CAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAGAAACAGGAGACACCGTGTG 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       722 CACCTGCCATGCAGGTTTCTTATCTAAGAGAAAACGAGTGTGTCTCCTGTAGTAACTGTAA 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match 17.0%;
Local Similarity 99.6%;
les 222; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: cDNA to mRNA
                                                                                                                                                                                                                                                                            STREET: 1140 Cont
CITY: Washington
STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG 824
                                                                                                                                                                                                                                                                                                       E: Adduci, Mastriani, Schaumberg & Schill
1140 Connecticut Avenue, N.W., Suite 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 221; DB 7; Length 462;
Pred. No. 1.21e-148;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

Į.

```
Š
                              문
                                                        ş
                                                                                      밁
                                                                                                                                                                             8888888888
                                                                                                                 Query Match 7.9%;
Best Local Similarity 99.0%;
Matches 104; Conservative
                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Homo Sapiens
DEVELOPMENTAL STAGE: Adult
Sequence 138 BP; 24 A; 51 C; 42 G;
                                                           870 CCACGGTGCCGCCCCATCAATGCCACCCTGGCTGTGGAGAAGGAGGGGCTGCCCCGTGTGC 929
                                                                       34 CCACGGTGCCACCCCATCAATGCCACCCTGGCTGTGGAGAAAGGAGGGCTGCCCCGTGTGC
                94 ATCACCGTCAACACCACCATCTGTGCCGGCTACTGCCCCCCACCATG 138
ATCACCGTCAACACCACCATCTGTGCCGGCTACTGCCCCACCATG
                                                                                                                 Score 103; DB 5;
Pred. No. 6.08e-57;
0; Mismatches 1
                                                                                                                                                                           G; 21 T; 0 other;
                                                                                                                   <u>..</u>
                                                                                                                                              Length 138
                                                                                                                   Indels
   974
                                                                                                                   0
                                                                                                                   Gaps
                                                                                        93
```

0

Search completed: Wed May 6 11:19:13 1998 Job time: 85 secs.



Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm Run on: Wed May 6 08:23:57 1998; MasPar time 4.43 Seconds

Run on: Wed May 6 08:23:57 1998; MasPar time 4.43 Seconds
Tabular output not generated.

Title: >US-08-804-166-6

Description: (1-285) from US08804166.pep

Perfect Score: 2183

Sequence: 1 SRTSLLLAFGLLCLPWLQEG......GFKVENHTACHCSTCYYHKS 285

Searched: 62627 segs, 5720858 residues

Scoring table:

PAM 150 Gap 11

Post-processing: Minimum Match 0% Listing first 45 summaries

a-issued 1.back1 2:51 3:52 4:53 5:54 6:55 7:56 8:57 9:PCT90 10:PCT91 11:PCT92 12:PCT93 13:PCT94 14:PCT95 15:PCT96

Database:

Statistics: Mean 30.064; Variance 126.027; scale 0.239

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

12 13 14 15 16 17 18 19 20 22 22 22	11 10 11 11	Result
318 284 225 225 225 221 221 212 212 210 183 183	1306 1306 1327 1227 994 919 912 666 589 337	Score
14.6 13.0 10.3 10.3 10.1 10.1 9.7 9.6 8.4	14.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5	Query Match
55555555555555555555555555555555555555	455 455 199 167 167 124 124 157 158 153 41	Length
7 10 15 17 17 17	7777777777	BB
US-08-050- US-08-050- US-08-292- US-08-292- PCT-US91-0 PCT-US91-0 5395760-4 US-08-292- PCT-US95-1 US-08-293- US-08-225-	US-08-050- US-08-050- US-08-050- US-08-050- US-08-050- US-08-050- US-08-050- US-08-050- US-08-050- US-08-050- US-08-050- US-08-050- US-08-050- US-08-050- US-08-050- US-08-050-	ID
E44,00000	sequence 2, sequence 2, sequence 2, sequence 5, sequence 5, sequence 5, sequence 54, sequence 52, sequence 26, sequence 26,	Description
ש ש ש ש ש ש ש ש ש	Application Applic	
3.09e-20 3.09e-20 1.64e-11 1.64e-11 1.64e-11 3.81e-11 3.81e-11 3.86e-10 1.06e-07 1.06e-07	7.75e-119 7.75e-119 8.08e-111 3.05e-87 9.96e-86 5.63e-79 2.50e-54 1.12e-46 4.112e-46 4.12e-42 8.28e-22	Pred. No.

US-08-188 Sequence 4, Application CG-08-453 Sequence 4, Application PCT-US95-0 Sequence 4, Application PCT-US95-0 Sequence 2, Application US-08-345 Sequence 2, Application US-08-345 Sequence 2, Application US-08-345 Sequence 2, Application US-08-345 Sequence 1, Application US-08-345 Sequence 1, Application US-08-35 Sequence 1, Application US-08-35 Sequence 1, Application US-08-453 Sequence 1, Application US-08-453 Sequence 1, Application US-08-453 Sequence 1, Application US-08-187 Sequence 5, Application US-08-187 Sequence 6, Application US-08-187 Sequence 6, Application US-08-187 Sequence 7, Application US-08-187 Sequence 1, Application US-08-097 Sequence 1, Application US																							
8.3 228 7 US-08-188 Sequence 4, Applicatio 8.3 228 17 US-08-453 Sequence 4, Applicatio 8.3 228 13 PCT-US95-0 Sequence 4, Applicatio 8.3 228 14 PCT-US95-0 Sequence 4, Applicatio 8.2 461 1 5395760-2 Patent No. 5395760-2 P	ū	44	3	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23
228 7 US-08-188 Sequence 4, Application 3 228 13 PCT-US94-0 Sequence 4 Application 3 228 14 PCT-US95-0 Sequence 4 Application 461 Type 1 Sys760-2 Patent No. 5395760.  2 461 Type 1 Sys760-2 Patent No. 5395760.  2 461 Type 1 Sequence 1 Application 1 Sys760-2 Patent No. 5395760.  2 461 Type 1 Sequence 2 Application 1 Sequence 2 Application 2 Sequence 3 Application 2 Sequence 3 Application 2 Sequence 4 Application 2 Sequence 5 Application 2 Sequence 5 Application 2 Sequence 5 Application 2 Sequence 4 Application 2 Sequence 4 Application 2 Sequence 5 Application 2 Sequence 6 Application 2 Sequence 4 Application 2 Sequence 5 Application 2 Sequence 4 Application 2 Sequence 5 Application 2 Sequence 6 Application 2 S	155	155	160	160	160	165	169	169	169	169	167	167	167	167	180	180	180	180	181	181	181	181	181
7 US-08-188 Sequence 4, Application CT-US94-0 Sequence 4, Application PCT-US94-0 Sequence 4, Application PCT-US95-0 Sequence 4, Application PCT-US95-0 Sequence 4, Application Sequence 2, Application Sequence 2, Application Sequence 1, Application US-08-38-5 Sequence 2, Application US-08-314 Sequence 24, Application US-08-314 Sequence 24, Application US-08-345 Sequence 24, Application US-08-345 Sequence 24, Application US-08-345 Sequence 12, Application US-08-453 Sequence 12, Application US-08-453 Sequence 10, Application US-08-153 Sequence 10, Application US-08-153 Sequence 10, Application US-08-187 Sequence 5, Application US-08-187 Sequence 5, Application US-08-187 Sequence 5, Application US-08-187 Sequence 5, Application US-08-187 Sequence 11, Application US-08-187 Sequence 11, Application US-08-097 Sequence	7.1	7.1	7.3	7.3	7.3	7.6	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	8.2	8.2	8.2	8.2	8.3	8.3	8.3	8. <sub>3</sub>	8 . 3
US-08-188 Sequence 4, Application PCT-US95-0 Sequence 4, Application PCT-US95-0 Sequence 4, Application PCT-US95-0 Sequence 2, Application PCT-US95-0 Sequence 2, Application PCT-US95-0 Sequence 2, Application PCT-US95-0 Sequence 4, Application PCT-US95-0 Sequence 4, Application PCT-US95-0 Sequence 2, Application PCT-US95-0 Sequence 2, Application PCT-US95-0 Sequence 1, Application PCT-US95-0 Sequence 10, Application PCT-US95-0 Sequence 5, Application PCT-US95-0 Sequence 6, Application PCT-US95-0 Sequence 11, Application PCT-US95-0 Sequence 12, Application PCT-US95-0 Sequence 13, Application PCT-US95-0 Sequence 14, Application PCT-US95-0 Sequence 15, Application PCT-US95-0 Sequence 17, Application PCT-US95-0 Sequence 18, Application PCT-US95-0 Sequence 19, Application PCT-US95-0 Sequ										333	93											228	
08-188 Sequence 4, Applicatio 08-433 Sequence 2, Applicatio 07934-0 Sequence 4, Applicatio 08-385-0 Sequence 4, Applicatio 08-385-0 Sequence 2, Applicatio 08-385-0 Sequence 2, Applicatio 08-385-1 Sequence 2, Applicatio 08-343 Sequence 2, Applicatio 08-344 Sequence 2, Applicatio 08-445 Sequence 2, Applicatio 08-445 Sequence 1, Applicatio 08-453 Sequence 1, Applicatio 08-453 Sequence 10, Applicatio 08-453 Sequence 10, Applicatio 08-453 Sequence 10, Applicatio 08-453 Sequence 5, Applicatio 08-653 Sequence 5, Applicatio 08-654 Sequence 6, Applicatio 08-655 Sequence 6, Applicatio 08-187 Sequence 6, Applicatio 08-187 Sequence 6, Applicatio 08-187 Sequence 1, Applicatio 08-097 Sequence 1, Applicatio										7 US	7 us		•	<u>.</u>			•	-		-		7 US	12 PCT
4, Applicatio 4, Applicatio 4, Applicatio 4, Applicatio 4, Applicatio 5, Applicatio 6, Applicati 24, Applicati 24, Applicati 24, Applicati 24, Applicati 26, Applicati 17, Applicati 18, Applicati 19, Applicati 10, Applicati 11, Applicati 10, Applicati 11, Applicati 10, Applicati 11, Applicati 11, Applicati 12, Applicati 13, Applicati 14, Applicati 15, Applicati 16, Applicati 17, Applicati 18, Applicati 19, Applicati 11, Applicati 11, Applicati 11, Applicati	3-08-097-	5-08-097-	-80-	3-08-187-	5-08-187-	- 680 - 80 -	T-US93-0	3-08-453-	T-US93-0	3-08-453-	3-08-343-	3-08-445-	3-08-314-	3-07-920-	3-08-385-	3-08-243-	95760-2	3-08-385-	T-US95-0	T-US94-0	3-08-453-	3-08-188-	T-US93-0
Application Applic	Sequence	Sequence	Sequence	Sequence			Sequence	Sequence	Sequence	Sequence	Sequence						Patent No					Sequence	Sequence
attio	11,	7, A	4, A	5, A			•	•	•	_	4 , A		•	•			ហ	•	•	•	•	4 , A	8, ≱
	Applicati	pplicatio	pplicatio	pplicatio	pplicatio	pplicatio	Applicati	Applicati	Applicati	Applicati	pplicatio	pplicatio	Applicati	Applicati	pplicatio	pplicatio	95760.	pplicatio	pplicatio	pplicatio	pplicatio	pplicatio	Applicatio
	3.10e-05	3.10e-05	٠	1.14e-05	1.14e-05	4.16e-06	1.85e-06	1.85e-06	1.85e-06	1.85e-06			2.77e-06	2.77e-06	1.96e-07	1.96e-07	1.96e-07	1.96e-07	1.59e-07	1.59e-07	1.59e-07	1.59e-07	1.59e-07

# ALIGNMENTS

8	n	ဌ	င္ပ	င္ပ	C	36	3 6	3 6	3 (	C C	ი	ဂ္ဂ	C	6	36	36	36	2 6	36	38	18	8	S	8	റ്റ	င္ပင	င္ပ	ဂ္ဂ	င္ပ	ဂ	ဂ္ဂ	ဂ္ဂ	ရ	20	ဂ္ဂ	ဌ	റ്റ	××	DE	××	ဌ	×	AC	××	ij	RESULT
2		TELEPHONE: 202-628-5197	TELECOMMUNICATION INFORMATION:	REFERENCE/DOCKET NUMBER: WALLACH=13	`_	_	AGENT INFORMA		100	APPLICATION NUMBER: IL 107268	PRIOR APPLICATION DATA:	CLASSIFICATION: 435		APPLICATION NUMBER: US/08/321,668		SUPTWAKE: PACENCIN KELEASE #1.0, VETSION #1.30	SYSTEM: PC-DOS/MS-DOS		ř	9	ZIP: 20004			_	::	ADDRESSEE: BROWDY AND NEIMARK	CORRESPONDENCE ADDRESS:	F SEQUENCES: 42	OF INVENTION: THE TNF RECEPTORS, THEIR PREPARATION	NVENTION:			BRAKEBUSC	APPLICANT: WALLACH, David	GENERAL INFORMATION:	o. 5665859	Sequence 2, Application US/08321668		Sequence 2, Application US/08321668.		01-JAN-1900 ·		XXXXX		US-08-321-668-2 STANDARD; PRT; 455 AA.	ULT 1

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  នននននន
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 25, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-050-319B-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 25, Application US/08050319B Patent No. 5633145
                                                                   REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
RELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEPHONE: (415) 327-3231
INFORMATION FOR SEQ ID NO: 25:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              59.8%;
Local Similarity 98.8%;
es 169; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
MOLECULE TYPE: protein
JENCE 455 AA; 50579 MW; 1048388 CN;
                    SEQUENCE CHARACTERISTICS:
LENGTH: 455 amino acid
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                           SOFTWARE: Patentin Release #1.0, version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 435
                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
COMPUTER: IBM PC com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: protein
JENCE 455 AA; 50494 MW; 1048031 CN;
                                                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: Robbins, Roberta L.
                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                   APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Recepto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                              CITY: Palo Alto
STATE: California
COUNTRY: USA
ZIP: 94301
                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                   COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                              STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH:
                                            455 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            455 amino acids
                                                                                                                                                                                                                                                                                                            635 Bryant Street
                                                                                                                                                                                                                                          Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŽO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1306; DB 7;
Pred. No. 7.75e-119;
1; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
Ş
Ş
                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                                                         Query Match
Best Local S
Matches 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 16
                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 199 anino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE 199 AA; 22186 MW; 195553 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 48, Application US/08050319B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-050-319B-48
                                                                                                                                                                                                                                   COMPUTER: IBM PC COMPATIBLE

COMPUTER: IBM PC COMPATIBLE

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PATENTIN RC-Lesse #1.0, version #1.25

SOFTWARE: PATENTIN RC-Lesse #1.0, version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/050,319B

FILING DATE: 10-May-1993

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

RAME: ROBBINS: ROBERTA L.

REGISTRATION NUMBER: 33,208

REFERENCE/DOCKET NUMBER: 31510-0030

TELECOMMUNICATION INFORMATION:

TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     101 SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 48, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         143 KQNTYCTCHAGFFLRENECYSCSNCKKSLECTKLSLPQIENYKGTEDSGTT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          161 KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     83
                 41 DSVCPTGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                                          Local Similarity
nes 156; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
 23
                                                                                                                                                                                                          TELEFAX: (415) 327-3231 INFORMATION FOR SEQ ID NO: 48:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 94301
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: COLORD CITY: Palo Alto CTATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCTLCLNGTVHLSCQE 142
DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        169;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                       56.2%;
larity 98.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      59.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                      Score 1227; DB 7; Pred. No. 8.08e-111; 1; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1306; DB 7;
Pred. No. 7.75e-119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                     Length 199;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 455
                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                         0
                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                         0
```

```
Š
                     밁
                                      ş
                                                          밁
                                                                            δÃ
                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                              Query Match
Best Local :
                                                                                                                    Matches
                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2, Application US/08050319B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-050-319B-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 2, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143
                     161
                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
                                         83
                                                                                        41 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                                                                                                                                                                                                REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
REFERENCE/DOCKET NUMBER: 5150-0030
RELECOMMUNICATION INFORMATION: TELEPHONE: (415) 617-8999
TELEPHAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83
                                                                                23
                                                                                                                   Match 45.5%; Score 994; DB 7; Local Similarity 99.2%; Pred. No. 3.05e-87, Nes 126; Conservative 1; Mismatches (
                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 435
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                      TOPOLOGY: linear
MOLECULE TYPE: protein
JENCE 167 AA; 18626 MW; 139513 CN;
                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 167 amino acids
                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: Robbins, Roberta L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                 SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCENCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQI 199
  KONTVCT
                     KONTVCT 167
                                      SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCTLCLNGTVHLSCQE 142
                                                                             DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                         CITY: Palo Alto
STATE: California
COUNTRY: USA
ZIP: 94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KONTYCTCHAGFFLRENECVSCSNCKKSLECTKLSLPQI 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCTLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQVRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                      TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                           635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                        Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          167
                                                                                                                   0;
                                                                                                                                      Length 167
                                                                                                                   Indels
                                                                                                                  0,
                                                                                                                  Gaps
                                                                                                                  0;
                                                                                                                                                                                                                                       Ş
                                                                                                 밁
                                                                                                                 Ş
                                                                                                                                     g
                                                                                                                                                       Š
                                                                                                                                                                            В
                                               RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
01-JAN-1900
                                      US-08-050-319B-4
```

```
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-050-319B-57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 57, Application US/08050319B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 57, Application US/08050319B Patent No. 5633145
143 KONTYCT 149
                                                                                                                                                                                                                                                 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No. 5633145
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                      41 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                                                                                                                                               83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (415) 327-32 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Match 45.5%;
Local Similarity 99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC COMPAtible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PAtentin Release #1.0, version
CURRENT APPLICATION DATA: aspect of the compatible of t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
JENCE 167 AA; 18626 MW; 139513 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION: TELEPHONE: (415) 617-8999
TELEFAX: (415) 327-3231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
COMPUTER: IBM PC com
                                                                                                                                                       SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCENCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 167 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: Reed & Robbins
                                                                             KQNTVCT 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Robbins, Roberta L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          167 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 994; DB 7; Le
Pred. No. 3.05e-87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 167;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

STANDARD;

PRT;

124

A

```
RESOLATION OF THE COLOR OF THE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 12
                                                                                                                                                        Sequence 50, Application US/08050319B
                                                                                                                                                                                                                                                                                              US-08-050-319B-50
                                                                                                                                                                                                         01-JAN-1900
                                                                                                                                                                                                                                                   XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
Sequence 50, Application US/08050319B
Patent No. 5633145
GENERAL INFORMATION:
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 4, Application US/08050319B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 4, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                              145 NTVC 148
                                                                                                                                                                                                                                                                                                                                                                                                                       121 NTVC 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         y Match 44.8%;
Local Similarity 99.2%;
hes 123; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Robbins, Roberta L.
NAME: ROBSINS, Roberta L.
REGISTRATION UNMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEPHONE: (415) 327-3231
INFORMATION FOR SEQ ID NO: 4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  85 SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYMSENLFQCFNCTLCLNGTVHLSCQEKQ 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQ 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (415) 327-323 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/0:
FILING DATE: 10-May-1993
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: protein
JENCE 124 AA; 14047 MW; 75840 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E: Reed & Robbins
635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 124 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/08/050,319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 979; DB 7;
Pred. No. 9.96e-86;
1; Mismatches 0
                                                                                                                                                                                                                                                                                            157 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
        %*E*E*S$$$$$$$$$$$$$$$$$$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                             Sequence 54, Application US/08050319B.
                                                                                                                                                                                                                                                                                                                                                                            01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                       XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-050-3198-54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: protein SEQUENCE 157 AA; 17570 MW; 122247 CN;
                                                                                                                                                                                                                                                               Sequence 54, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180 QI 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              156 QI 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120 ENLFQCFNCTLCLNGTVHLSCQEKQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLSLP 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96 ENLFOCFNCSLCLNGTVHLSCQEKQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLP 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60 DTDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYMS 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              36 DREKRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                   APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy
                                                                                                           NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Robbins, Roberta L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: Necrosis Factor alpha) Receptor NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 635 Bryant Street
CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
        COUNTRY:
                                                                   STREET:
                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ch 41.8%;
1 Similarity 95.9%;
117; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94301
                        Palo Alto
: California
                                                                   635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (415) 617-8999
(415) 327-3231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Reed & Robbins
                                                                                           Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 912; DB 7;
Pred. No. 5.63e-79;
2; Mismatches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                               158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ű,
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

Gaps 95

0

Ş

В á В

밁

Indels

<u>ن</u>

Gaps

4

```
Š
        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          888888888888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 30.5%;
Best Local Similarity 97.7%;
Matches 86; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: ROBBINS, ROBERTA L.
REGISTRATION NUMBER: 33, 208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEPRAX: (415) 617-899
TELEFRAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 54:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                   XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-050-319B-52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                              Sequence 52, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101 SCSKCRKEMGQVEISSCTVDRDTVCTCH 128
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIAN Release #1.0, version #1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-May-193
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: ROBbins, Roberta L.
                                                                                                                                                                                                                                                                                                                         Sequence 52, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                       Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA: BAPLICATION NUMBER: US/08/050,319; FILING DATE: 10-May-1993 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              83 SCSKCRKEMGQVEISSCTVDRDTVCGCR 110
                                                                                                                ZIP: 94301
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                      APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                             STREET: 635 Bryant
CITY: Palo Alto
STATE: California
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: amino acid
                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LE TYPE: protein
158 AA; 17375 MW; 124033 CN;
                                                                                                                                                                                                635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          158 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PatentIn Release #1.0, version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                 Reed & Robbins
                                                                                                                     Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/050,319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 666; DB 7;
Pred. No. 2.50e-54;
1; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                          153 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8888888888888
      ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 52:
SEQUENCE CHARACTERISTICS:
LENGTH: 153 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-050-319B-36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 36, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           XXXXX
                                                                                                                                        COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: ROBbins, Roberta L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 3150-0030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 36, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      116 FNCTLCLNGTVHLSCQEKQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLSLPQI 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Patent No.
                                                                TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 36:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27.0%;
Local Similarity 69.8%;
les 81; Conserva+*...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          66 CESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQC 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98 FNCSLCLNGTVHLSCQEKQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQI 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44 CPQGKYIHPQNN-SIC--CTKCHK--GTYLYNDCPGPGQDT-DCRKNQYRHYWSENLFQC
                                                                                                      REFERENCE/DOCKET NUMBER: 51
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: protein JENCE 153 AA; 17148 MW; 116104 CN;
                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: Modified human TNFalpha (Tumor TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: M.Feldmann, P. APPLICANT: M.J.C. Turner,
                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                     STATE: C
                TYPE: amino acid
STRANDEDNESS: si
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                           ZIP: 94301
                                                      LENGTH:
                                                                                                                                                                                                                                                                                                                                                Palo Alto
                                                                                                                                                                                                                                                                                                                                  California
                                                   41 amino acids
                                                                                                                                                                                                                                                                                                                                                            635 Bryant Street
                                                                                                                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                                                                                                      M.Feldmann, P.W. Gray,
M.J.C. Turner, F.M Brennan
                            single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 589; DB 7;
Pred. No. 1.12e-46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 153
```

```
8X5
                                                                         Š
                                                                                                 밁
                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                       Best Local
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                             INFORMATION FOR SEQ ID NO: 26
SEQUENCE CHARACTERISTICS:
LENGTH: 40 amino acids
TYPE: amino acid
STRANDEDNESS: single
MOLECULE TYPE: protein
                           US-08-050-319B-31
                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 26, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-050-319B-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 26, Application US/08050319B Patent No. 5633145
                                                                       25 VCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCR 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match 15.4%;
Local Similarity 97.6%;
                                                                                              1 VCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCR 40
                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC COMPAS-DOS
SOFTWARE: Patentin Release #1.0, version #1.25
CURENT APPLICATION DATA:
APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 435
APPROPRETY ASSESSMENT APPLICATION: 435
                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: ROBEITS L.
REGISTRATION NUMBER: 33.208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
COMPUTER: IBM PC com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE: C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                   h 14.8%; Score 324; DB 7; I6 Similarity 100.0%; Pred. No. 8.28e-21; 40; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41
                                                                                                                                                                    LE TYPE: protein 40 AA; 4459 MW; 7536 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E: Reed & Robbins
635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4856 MW; 8601 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 337; DB 7;
Pred. No. 4.74e-22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                          43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6
                                                                                                                                            Length 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 41;
                                                                                                                      Indels
                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                     0
                                                                                                                                                                                                    RESULT
ID US
  &*E*E*S33333333333
                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 31
SEQUENCE CHARACTERISTICS:
LENGTH: 43 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                               Sequence 40, Application US/08050319B.
                                                                                                                                                        01-JAN-1900
                                                                                                                                                                                                       US-08-050-319B-40
                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-JAN-1900
                                                                                                                                                                               XXXXXX
                                                                                             Sequence 40, Patent No. 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 31,
Patent No. 5
                                                                                                                                                                                                                                                                                                y Match 14.6%;
Local Similarity 100.0%;
hes 43; Conservative
                                                                                                                                                                                                                                                     65 ECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVC 107
                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                  1 ECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVC 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: ROBEITS. Roberts L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
        APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Mecrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version #1.25
CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: DISTRECT: Palo Alto CITY: Palo Alto STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human INFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/08/050,319B FILING DATE: 10-May-1993 CLASSIFICATION: 435
 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                LE TYPE: protein
43 AA; 4767 MW; 9758 CN;
                                                                                              ), Application US/08050319B 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/08050319B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      635 Bryant Street
Reed & Robbins
                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                Score 318; DB 7;
Pred. No. 3.09e-20;
0; Mismatches 0
                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                       39
                                                                                                                                                                                                      ₽
                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                        Length 43;
                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                  Gaps
```

```
RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                               XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-292-549-2
                                                                                                                                                                                                                                                                                                                                                                                                                  01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                  Sequence 2, Application US/08292549.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 2, Application US/08292549 Patent No. 5464938
                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Smith, Craig A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity 97.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                               APPLICANT: Smith, Craig A.
APPLICANT: Goodwin, Raymond G.
TITLE OF INVENTION: Isolated Viral Protein TNF Antagonists
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
                                                                                                                          ZIP: 98101
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: ROBBINS, ROBERTA L.
REGISTRATION NUMBER: 33.208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415), 617-8999
TELEPHONE: (415), 617-8999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version #1.25
CURRENT APPLICATION DATA:
                                                           COMPUTER: IBM PC COmpatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/292,549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: Robbins, Roberta L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
FILING DATE:
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET:
CITY: F
STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 39 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: FILING DATE: 10-May CLASSIFICATION: 435
                                                                                                                                                                                                         STREET: 51 Uni
CITY: Seattle
                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LE TYPE: protein
39 AA; 4335 MW; 8059 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   California
                                                                                                                                                                                        Washington
                                                                                                                                                                                                                     E: Immunex Corporation
51 University Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               635 Bryant Street
                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-May-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/08/050,319B
    07/963,330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 284; DB 7;
Pred. No. 5.18e-17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ⋛
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ຄຸຄຄຸຄຄຸຄຄຸຄຄຸຄຄຸຄຄຸຄຄຸ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.24
CURRENT APPLICATION DATA:
"""TTTATION NUMBER: PCT/US91/02207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 2, Application PC/TUS9102207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PCT-US91-02207-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 2, Application PC/TUS9102207 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10.3%;
Local Similarity 34.8%;
les 39; Conservation
                                                                                               APPLICATION NUMBER: PCT/US91/
FILING DATE: 19910329
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Wight, Christopher L.
REGISTRATION NUMBER: 31,680
REFERENCE/DOCKET NUMBER: 2602
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION 10F0RMATION:
                                                                        TELEFAX: (206) 587-06 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62 SPCEDGTFTASTNHAPACVSCRGPCTGHLSESQ--PCDRTHDRVCNCSTGNY 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (206) 233-0644
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64 RECESGSFTASENHLRHCLSC-SKCRKEMGQVEISSCTVDRDTVCGCRKNQY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6 LLAFGLICLPWLQEGSADSVCPQGKYI-HP-QNNSICCTKCHKGTYLYNDCPGPGQDTDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 LIAL-LYCVYYYYGDDVPYSSNQGKCGGHDYEKDGLCCASCHPGFYASRLC-GPGSNTVC 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: 26
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 587-0430
                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Smith, Craig A.
APPLICANT: Goodwin, Raymond G.
TITLE OF INVENTION: Isolated Viral Protein Cytokine Antagonists
NUMBER OF SEQUENCES: 4
                                          SEQUENCE CHARACTERISTICS:
LENGTH: 325 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 10/19/92
ATTORNEY/AGENT INFORMATION:
 MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                               STREET: 51 Uni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME:
                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LE TYPE: protein
325 AA; 35132 MW; 591446 CN;
                           H: 325 amino acids
AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Perkins, Patricia A
                                                                                                                                                                                                                                                                                                                                                  Washington
                                                                                                                                                                                                                                                                                                                                                                              E: Immunex Corporation
51 University Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               325 amino acids
                                                                                                                                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                  linear
                                                                                       587-0606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 225; DB 5;
Pred. No. 1.64e-11;
21; Mismatches 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                34,693
                                                                          ..
                                                                                                                                  2602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2602-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
```

63

6

ş 밁

5 4 6 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	SC01	Statistics: Pred. No. 1 score great and is deri	Searched: Post-processing: Database:	able:	MPsrch_nn n.a Run on: We Tabular output not Title: >t Description: (: Perfect Score: 1: N.A. Sequence: Comp:	Release 3.
40.5 600 7 US-08-050- Sequence 2, Applicatio 0.00e+00 32.7 504 7 US-08-050- Sequence 4, Applicati 8.54e-293 501 7 US-08-050- Sequence 1, Applicati 4.58e-291 31.7 372 7 US-08-050- Sequence 1, Applicatio 2.74e-283 30.1 474 7 US-08-050- Sequence 3, Applicatio 2.74e-283 30.1 474 7 US-08-050- Sequence 5, Applicatio 2.74e-287 25.0 4283 7 US-08-343- Sequence 5, Applicatio 5.86e-217 25.0 4283 7 US-08-455- Sequence 1, Applicatio 5.86e-217 25.0 4283 7 US-08-050- Sequence 5, Applicatio 5.86e-217 25.0 4283 7 US-08-050- Sequence 5, Applicati 1.56e-189 25.0 4283 7 US-08-187- Sequence 5, Applicati 1.02e-153 5.8 534 6 US-08-187- Sequence 5, Applicati 4.70e-33 5.8 534 6 US-08-187- Sequence 3, Applicati 4.70e-33 5.1 321 6 US-08-187- Sequence 2, Applicati 3.86e-26 5.1 321 4 US-07-920- Sequence 2, Applicati 3.86e-26 5.1 321 4 US-07-920- Sequence 2, Applicati 3.86e-26 5.0 597 6 US-08-187- Sequence 3.0 597 6 US	SUMMARIES  agth DB ID  Description  Pr  2062 7 US-08-050- Sequence 24, Applicati 0 2175 7 US-08-321- Sequence 1, Applicatio 0 2175 7 US-08-321- Sequence 2, Applicatio 0 2889 14 PCT-US95-0 Sequence 2, Applicatio 0	1 11:PCT92 12:PCT93 13:PCT 7; Variance 4.288; scale ber of results predicted ber equal to the score of the alysis of the total score	s, 26354296 bases x 2 tch 0% rst 45 summaries 2:51 3:52 4:53 5:54 6:55 7:5		n.a. database s n.a. database s ad May 6 10:56:( generated. 15-08-804-166-5 [-1147] from USO( 147 1 TCGAGATGGC1 AGCTCTACCGG	0.5AA John F. Collins, Biocomputing Re
CC COMPUTER: IBM PC compatible CC COMPUTER: IBM PC compatible CC COMPUTER: PC-DOS/MS-DOS CC SOTTWARE: Patentin Release #1.0, version #1.25 CC CURRENT APPLICATION DATA: CC APPLICATION UMBER: US/08/050,319B CC FILING DATE: 10-May-1993 CC ATTORNEY/AGENT INFORMATION: CC ATTORNEY/AGENT INFORMATION: CC NAME: ROBBINS ROBERTS 33,208 CC REGISTRATION NUMBER: 33,208 CC REGISTRATION NUMBER: 3150-0030 CC TELECOMMUNICATION INFORMATION: CC TELECOMMUNICATION INFORMATION: CC TELECOMMUNICATION INFORMATION: CC TELECOMMUNICATION INFORMATION: CC TELECOMMUNICATION 10FORMATION: CC TELECOMMUNICATION 10FORMATION 10FORMATION 10FORMATION 10FORMATION 10FORMATION 10FORMATION 10FORMATION 10FORMATION 10FORMA			01-JAN-1900 Sequence 20	ALIGNMENTS RESULT 1 ID US-08-050-319B-24 STANDARD; DNA; UNC; 2062 BP.	34 3.0 5323 12 PCT-US93-0 Sequence 34 3.0 5323 12 PCT-US93-0 Sequence 23 2.5 215 6 US-08-238- Sequence 24 25 215 6 US-08-238- Sequence 25 2.3 81 14 PCT-US95-1 Sequence 25 2.2 74 14 PCT-US95-1 Sequence 25 2.2 74 14 PCT-US95-1 Sequence 25 2.2 82 14 PCT-US95-1 Sequence 26 2.3 81 14 PCT-US95-1 Sequence 27 28 21 PCT-US95-1 Sequence 28 21 PCT-US95-1 Sequence 29 20 21 S7 US-08-050- Sequence 20 21 S7 US-08-050- Sequence	20 4.4 2248 7 US-08-740- Sequence 1, Applic 22 50 4.4 2248 7 US-08-780- Sequence 1, Applic 23 50 4.4 2248 7 US-08-636- Sequence 1, Applic 23 50 4.4 2248 7 US-08-636- Sequence 1, Applic 24 51 4.4 7218 7 US-08-659- Sequence 14, Applic 24 51 4.4 7218 7 US-08-232- Sequence 14, Applic 25 38 3.3 7218 7 US-08-388- Sequence 14, Applic 25 38 3.3 7218 7 US-08-388- Sequence 14, Applic 26 38 3.3 7218 7 US-08-388- Sequence 14, Applic 27 34 3.0 215 6 US-08-232- Sequence 7, Applic 28 34 3.0 4810 12 PCT-US93-0 Sequence 7, Applic 28 34 3.0 4810 13 PCT-US93-0 Sequence 3, Applic 30 34 3.0 4810 13 PCT-US94-0 Sequence 3, Applic 31 34 3.0 4810 14 PCT-US95-0 Sequence 3, Applic 33 34 3.0 5125 7 US-08-453- Sequence 11, Applic 34 34 3.0 5125 12 PCT-US93-0 Sequence 11, Applic 34 34 3.0 5125 12 PCT-US93-0 Sequence 11, Applic 34 34 3.0 5125 12 PCT-US93-0 Sequence 11, Applic 34 34 34 3.0 5125 12 PCT-US93-0 Sequence 11, Applic 34 34 34 34 35 5125 12 PCT-US93-0 Sequence 11, Applic 34 35 5125 12 PCT-US93-0 Sequence 11, Applic 34 34 34 35 5125 12 PCT-US93-0 Sequence 11, Applic 34 35 5125 12 PCT-US93-0 Sequence 11, Applic 35 5125 12 PCT-US

<b>78901138456789013845</b>	254
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	33870000
33333333333333333333333333333333333333	
215 6 4810 7 4810 13 4810 17 4810 7 5125 7 5125 7 5125 7 5123 12 5323 7 215 33 7 81 14 74 14 81 14 81 14 81 14 81 14 81 14 82 14	<b>a</b> a a a a a a a
QS-08-23 QS-08-45 PCT-US94 PCT-US94 PCT-US95 QS-08-18 QS-08-18 QS-08-08-08-08-08-08-08-08-08-08-08-08-08-	US-08-7 US-08-6 US-08-8 US-08-3 US-08-3 US-08-3
Sequence Seq	- Sequenc - Sequenc - Sequenc - Sequenc - Sequenc - Sequenc
e 5, Applice 7, Applice 6 7, Applice 6 3, Applice 3, Applice 6 3, Applice 6 11, Applice 6 11, Applice 6 11, Applice 6 12, Applice 6 14, Applice 6 14, Applice 6 14, Applice 6 14, Applice 6 15, Applice 6 16, Applice 6 17, Applice 6 18, Applice 6 19, Applic	
9.19 9.19 9.19 9.19 9.19 9.19 9.19 9.19	3.87 3.87 3.87 3.87 7.03 1.67

### ALIGNMENTS

419 Seventh

Street,

Suite

```
RESULT
ID US
                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                         δô
                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 44.18;
Best Local Similarity 98.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                         Sequence 1,
Patent No. 5
GENERAL INF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: CDS
LOCATION: 155..1519
Sequence 2062 BP; 429 A; 617 C; 573 G; 443 T; 0 other:
                                                                                                                                                      Sequence 1,
                                                                                                                                                                              01-JAN-1900
                                                                                                                                                                                                                                     US-08-321-668-1 STANDARD; DNA; UNC; 2175 BP
                                                                                                                                                                                                                                                                                     824
                                                                                                                                                                                                                                                                                                                                                         695
                                                                                                                                                                                                                                                                                                                                                                                                      635
                                                                                                                                                                                                                                                                                                                                                                                                                            644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 344
                                                                                                                                                                                                                                                                                                            755
                                                                                                                                                                                                                                                                                                                                  764
                                                                                                                                                                                                                                                                                                                                                                                704
                                                                                                                                                                                                                                                                                                                                                                                                                                                     575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        275 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 334
      APPLICANT: WALLACH, David
APPLICANT: BRAKEBUSCH, CORT
APPLICANT: VARFOLOMEEV, EUgene
APPLICANT: VARFOLOMEEV, EUgene
APPLICANT: BATKIN, Michael
TITLE OF INVENTION: MOLECULES INFLUENCING THE SHEDDING
TITLE OF INVENTION: THE TWF RECEPTORS, THEIR PREPARATIC
NUMBER OF SEQUENCES: 42
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: cDNA to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: n
                                                                                                                                                                                                                                                                                  AATGTTAAGGGCACTGAGGACTCAGGCACCACAGCCGGTGCTGCCCCAGGT
                                                                                                                                                                                                                                                                                                                                           TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                          TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 394
                                                                                                                                                                                                                                                                                                        AATGTTAAGGGCACTGAGGACTCAGGCACCACAGT-GCTGTTGCCCCCTGGT
                                                                                                                                                                                                                                                                                                                                TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                          TTCCAGTGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
TOPOLOGY: 11
                                                                                                                                                                                                                                                                                                                                                                             INFORMATION:
                                                                                                                     Application US/08321668 5665859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nucleic acid
                                                                                                                                                      Application US/08321668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2062 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
BROWDY AND NEIMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. 0.00e+0
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 506; DB 7;
Pred. No. 0.00e+00;
                                   THEIR PREPARATION AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2062;
                                                                                                                                                                                                                                                                                                          804
                                              ဝ္
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                  THEIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                463
                                                                                                                                                                                                                                                                                                                                823
                                                                                                                                                                                                                                                                                                                                                       754
                                                                                                                                                                                                                                                                                                                                                                             763
                                                                                                                                                                                                                                                                                                                                                                                                    694
                                                                                                                                                                                                                                                                                                                                                                                                                           703
                                                                                                                                                                                                                                                                                                                                                                                                                                                634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1;
                                  USE
```

```
S
                         밁
                                              Š
                                                                      밁
                                                                                             Š
                                                                                                                      밁
                                                                                                                                             Ş
                                                                                                                                                                       밁
                                                                                                                                                                                         Ş
                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                           ρ
                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                           QV
                                                                                                                                                                                                                                                                                                                    용
                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 202-737-3528
TELEX: 248633
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 2175 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: CDNA
FEATURE:
NANCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1
CURRENT APPLICATION IDATA:
APPLICATION NUMBER: US/08/321,668
FILING DATE: 12-OCT-1994
CLASSIFICATION - 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: IL 107268
FILING DATE: 12-OCT-1993
ATTORNEY/AGENT INFORMATION:
NAME: BROWDY, ROGET L.
REGISTRATION NUMBER: 25,618
REFERENCE/DOCKET NUMBER: WALLACH-13
                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: CDS
LOCATION: 256..1620
Sequence 2175 BP; 474 A;
                                                                                                                                                584
                                                                                                                                                                        616
                                                                                                                                                                                                                        556
                                                                                                                                                                                                                                                                                                                                           344 GATAGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                         796
                                                                                                                                                                                                524
                                                                                                                                                                                                                                               464
                                                                                                                                                                                                                                                                                             404
                                                                                                                                                                                                                                                                                                                                                                  376 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
  764
                                                                                                                                                                                                                                                                                                                                                                                          Match 44.18;
Local Similarity 98.18;
ses 521; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-628-5197
TELEFAX: 202-737-3528
                                                                                                                                                                                                                                                         TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
             TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                              AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                           AGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                                                                                            TICCAGIGCTICAATIGCAGCCTCTGCCTCAATIGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                            CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                   AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCTACCCCAGATTGAG
                                                                                                TTCCAGTGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAG
                                                                                                                                              CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                               TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                D.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                          641
                                                                                                                                                                                                                                                                                                                                                                                          Score 506; DB 7; Pred. No. 0.00e+00; 0; Mismatches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                          Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                          604 G; 456 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                       0 other;
                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                  Length 2175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #1.30
                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                           ۲,
                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                        855
                                                                                                                                                                                                                                                                                            463
                                                                                                                                                                                                                                                                                                                   495
                                                                                                                                                                                                                                                                                                                                            403
                                                763
                                                                      795
                                                                                              703
                                                                                                                      735
                                                                                                                                              643
                                                                                                                                                                       675
                                                                                                                                                                                               583
                                                                                                                                                                                                                       615
                                                                                                                                                                                                                                             523
```

밁

856

AATGTTAAGGGCACTGAGGACTCAGGCACCAGAGT-GCTGTTGCCCCTGGT 905

```
밁
                                                        á
                                                                                             ş
                 Ş
                                                                            밁
                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ħ
                                                                                                                                   Query Match
Best Local S
Matches 50
                                       1845
                                                                            1785
                                                                                                      1725 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 1784
                                                                                                                                                                    TOPOLOGY: linear Sequence 6889 BP; 1729 A; 1826 C; 1681 G; 1653 T; 0 other:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 2, Application PC/TUS9509576 GENERAL INFORMATION:
1905 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2, Application PC/TUS9509576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PCT-US95-09576-2 STANDARD; DNA; UNC; 6889 BP
                     464
                                                          404
                                                                                            344 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 403
                                                                                                                                                                                                                     TELEFAX: 415/952-9881
TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  824
                                                                                                                                           Local Similarity 99.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: GENENTECH, INC.
TITLE OF INVENTION: METHOD FOR SELECTING HIGH-EXPRESSING
TITLE OF INVENTION: HOST CELLS
                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 79
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-1994
                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 08/20
FILING DATE: 05-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Lee, Wendy M.
                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: patin (Genentech) CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                  TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                              TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 190
                                                       AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                                                                                                                                                                                           LENGTH:
                  TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                         AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 1844
                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATGTTAAGGGCACTGAGGACTCAGGCACCACAGCCGGTGCTGCCCCAGGT 874
                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                      94080
                                                                                                                                                                                                                                                                                                                                                                                                                                                        South San Francisco 
: California
                                                                                                                                   Conservative
                                                                                                                                                                                                             6889 bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E: Genentech, Inc.
460 Point San Bruno
                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                              08/286740
                                                                                                                                                                                                                                                                                      00,000
                                                                                                                                                                                                                                                                                                                                                                    PCT/US95/09576
                                                                                                                                 Score 504; DB 14; I
Pred. No. 0.00e+00;
0; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                             798PCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B1vd
                                                                                                                                                                                                                                                                                                                                                                                                                 Kb floppy disk
                                                                                                                                                   Length 6889;
                                                                                                                                  Indels 0;
                                                                                                                                  Gaps
                  523
                                                        463
                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δõ
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
```

```
RESULT 4
ID US-08-286-740-2 STANDARD; DNA; UNC; 6889 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2, Application Patent No. 5561053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2, Application US/08286740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            524
                                                       TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          824 AATGTTAAGGGCACTGAGGACTCAGGCACCACAG 857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Crowley, TITLE OF INVENTION: TITLE OF INVENTION:
                      SEQUENCE CHARACTERISTICS:
LENGTH: 6889 bases
                                                                                                TELEPHONE: 415/225-1994
                                                                                                                                                                        FILING DATE: ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                 CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                         OPERATING SYSTEM: PC-DOS/MS
SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch,
                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                      TELEPHONE: 415/252-9881
                                                                                                                            NAME: Lee, Wendy M.
REGISTRATION NUMBER:
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                               APPLICATION NUMBER: US/08/286,740 FILING DATE: 05-AUG-1994
                                                                                                                                                                                                                                                                                                                                                                                                                         STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCCAGTGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGACACCGTGTGGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: U
ZIP: 94080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AATGTTAAGGGCACTGAGGACTCAGGCACCACAG 2238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG 2084
STRANDEDNESS:
                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                           F: 460 Point San Bru
South San Francisco
            nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                               California
                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Crowley,
                                                                                                                                                                                                                                                                                                                   IBM PC compatible
double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   , Craig W.
METHOD FOR
HOST CELLS
                                                                                                                                                                                                                                                                                                          PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/08286740
                                                                                                                                                                                                                                                                                                                                                                                                                          Bruno
                                                        2
                                                                                                                                                                                                                                                                                                                                    360 Kb floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                            Blvd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SELECTING HIGH-EXPRESSING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               220
```

```
Ş
                                                                                                                                                                                                                                                  ä
                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ဗ္ဗ ဂ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear
Sequence 6889 BP; 1729 A;
                                                                                                                                                         Sequence 47, Application Patent No. 5633145
                                                                                                                                                                                                                                                  US-08-050-319B-47 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1845
                                                                                                                                                                                    Sequence 47, Application US/08050319B
                                                                                                                                                                                                       01-JAN-1900
                                                                                                                                                                                                                                                                                                         2205
                                                                                                                                                                                                                                                                                                                                             2145
                                                                                                                                                                                                                                                                                                                                                                                2085
                                                                                                                                                                                                                                                                                                                                                                                                                    2025
                                                                                                                                                                                                                                                                                                                                                                                                                                                       1965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1905
                                                                                                                                                                                                                         CXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              464
                                                                                                                                                                                                                                                                                                                           764
                                                                                                                                                                                                                                                                                                                                                              704
                                                                                                                                                                                                                                                                                                                                                                                                  644
                                                                                                                                                                                                                                                                                                                                                                                                                                      584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 404
                                                                                                                                                GENERAL INFORMATION:
                                                                            APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
Reed 6 Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatil
                                           STATE: C
                                                                                                                                                                                                                                                                                                                                   TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 1844
 COMPUTER: IBM PC OPERATING SYSTEM:
                                                      CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                      AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                                                                                                        AATGTTAAGGGCACTGAGGACTCAGGCACCACAG 2238
                                                                                                                                                                                                                                                                                                                        TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCCTACCCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                            TTCCAGTGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                           TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ch 43.9%;
l Similarity 99.0%;
509; Conservative
                                     94301
                                                                       E: Reed & Robbins
635 Bryant Street
                                              USA
compatible
PC-DOS/MS-DOS
                                                                                                                                                                 US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1826 C; 1681 G; 1653 T; 0 other;
                                                                                                                                                                                                                                                  DNA; UNC; 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 504; DB 6; Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                       857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 6889;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1904
                                                                                                                                                                                                                                                                                                                                          2204
                                                                                                                                                                                                                                                                                                                                                                              2144
                                                                                                                                                                                                                                                                                                                                                                                                703
                                                                                                                                                                                                                                                                                                                                                                                                                                    643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               463
                                                                                                                                                                                                                                                                                                                         823
                                                                                                                                                                                                                                                                                                                                                            763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
25x2x2x3x
                                                                                                                                                              Ş
                                                                                                                                                                                 밁
                                                                                                                                                                                                ő
                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                             맑
                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                       밁
```

```
RESULT
ID US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 40.5%;
Best Local Similarity 98.3%;
Matches 472; Conservative
   US-08-050-319B-56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 600 BP; 148 A; 157
                                                                                                                               704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 GATAGTGTGTGTCCCACAGGAAAATATATCCACCCTCAAAATAATTAGTTGGATTTGCTGTACC
                                                                                                  541
                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                     584
                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                    524
                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                      464
                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   344 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (415) 327-32 INFORMATION FOR SEQ ID NO:
                                                                   764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 600 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Robbins, Roberta L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/01
FILING DATE: 10-May-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: RODDINS, RODETTA L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:
                                                                 TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCTACCCCAGATTGAG
                                                                                TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTTAG
                                                                                                                                AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                     TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAAACCACCTCAGACACTGCCTC
                 σ
                                                                                                                                                                                                                                 TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                 TTCCAGTGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                  TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: CDS
LOCATION: 1..597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
TOPOLOGY: lin
                                                                                                                                                                                                                                                                                                                                 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PatentIn Release #1.0, version
 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     327-3231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/08/050,319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA
DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 464; DB 7;
Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C; 162 G; 133 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
UNC; 504
ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                  420
                                                                                                600
                                                                                                                                                                 540
                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                   643
                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                    523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     403
                                                                                                                                763
                                                                                                                                                                                                  703
```

Sequence 56, Application Patent No. 5633145

US/08050319B

Sequence 56, Application US/08050319B

XXXXXX

GENERAL INFORMATION:

```
Query Match
Best Local S
Matches 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: ROBBINS, ROBERTA L.
REGISTRATION UNMBER: 3,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEPAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 56:
SEQUENCE CHARACTERISTICS:
LENGTH: 504 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION: 1..501 Sequence 504 BP; 122 A; 137 C; 138 G; 107 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 344
                                                                                                                   421
                                                                                                                                                         584
                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                    464
                                                                                                                                                                                                                                                                                                                                                                                                   404
                                                                                                                                                                                                                                                                                                                                                                                                                   181 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-May-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: cDNA to mRNA FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: Reed & F
STREET: 635 Bryant
CITY: Palo Alto
STATE: California
                                                                          TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GATAGTGTGTGCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
TOPOLOGY: 11
                                       AAACAGAACACCGTGTGCACCTG 503
                                                                                                                                                                                              CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                      AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
AAACAGAACACCGTCTGCACCTG 726
                                                                                                                                                                                                                                   AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: CDS
LOCATION: 1..!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               h 32.7%;
Similarity 99.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 375; DB 7; L
Pred. No. 8.54e-293;
0; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 504;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                       643
                                                                                                                                                                                                                                   583
                                                                                                                                                                                                                                                                                                                  523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

밁

ş

Ş 밁 Ş 뮹 å

Ş 밁 Š 용 밁 Š 밁

```
밁
                                                  Ş
                                                                                밁
                                                                                                       Š
                                                                                                                                   밁
                                                                                                                                                              Ş
                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                    Query Match
Best Local S
Matches 37
                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: ROBBITS, ROBERTA L.
REGISTRATION NUMBER: 3,208
REFERENCE/DOCKET NUMBER: 5150-0030
REFERENCE/DOCKET NUMBER: 5150-0030
RELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-899
TELEPAX: (415) 627-3231
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                         TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
FEATURE:
NAME/KEY: CDS
LOCATION: 1..501
Sequence 501 BP; 121 A; 137 C; 137 G; 106 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-050-319B-1 STANDARD; DNA; UNC; 501 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1, Application US/08050319B
                         301
                                                     464
                                                                                                          404
                                                                                                                                    181
                                                                                                                                                              121 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                    y Match 32.5%;
Local Similarity 99.0%;
hes 377; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Rel
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M. Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 5
               AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                               TGCAGGGAGTGTGAGAGCGGCTCCTTCACCCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                         AGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGCCAGGATACCGAC
                                                                                                                                   AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/08/050,319B FILING DATE: 10-May-1993 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PatentIn Release #1.0,
                                                     TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Palo Alto
AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                       LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94301
                                                                                                                                                                                                                                                                                                                                                                                     501 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Reed & Robbins
                                                                                                                                                                                                                    Score 373; DB 7; Length 501 Pred. No. 4.58e-291; 0; Mismatches 4; Indels
                                                                                                                                                                                                                                              Length 501;
                                                                                                                                                                                                                     0
                                                                                                                                                                                                                     Gaps
                         360
                                                                                                         463
                                                                                                                                   240
                                                                                                                                                                403
                                                     523
                                                                               300
                                                                                                                                                                                                                       0
```

```
밁
                                                                RESULT
ID U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뮻
                                      Query Match
Best Local :
                                                                                                                       INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 372 base pairs
TYPE: nucleic acta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-050-319B-3 STANDARD; DNA; UNC; 372 BP
                                                              Sequence 372
                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 3,
Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 3, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 XXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361 CGGGACACCGTGTGTGGCTGCAGGAAGACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            704
1 GTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACCAAGTGC 60
                                                                                                                                                                                                                                                                                                                                                             APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Recepton
NUMBER OF SEQUENCES: 57
                                                                                         FEATURE:
                                                                                                                                                                    NAME: Robbins, Roberta L.
REGISTRATION NUMBER: 33,208
REGISTRATION NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
                                                                                                                                                                                                               APPLICATION NUMBER: US/01
FILING DATE: 10-May-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAACAGAACACCGTGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TICCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                       NAME/KEY: CDS
LOCATION: 1.372
ence 372 BP; 98 A; 102 C; 95 G; 77 T; 0 other;
                                                                                                                                                                                                                                                                                                                      CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAACAGAACACCGTCTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCCAGTGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGACACCGTGTGGGTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                          TOPOLOGY:
                                                                                                                TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                            h 31.7%;
Similarity 98.9%;
368; Conservative
                                                                                                                                                                                                                                                                                                      94301
                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/08050319B
5633145
                                                                                                                                                                                                                                                                                                                                      635 Bryant Street
                                                                                                                                                                                                                                                                                                              USA
                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                Reed & Robbins
                                                                                               DNA (genomic)
                                                                                                                                                                                                                                         US/08/050,319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           501
                         Score 364; DB 7; Length 372; Pred. No. 2.74e-283; 0; M1smatches 4; Indels
                           0
                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               420
 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                          SEQUENCE CHARACTERISTICS:
                LENGTH:
```

```
ID US-08-050-319B-49 STANDARD; DNA; UNC; 474 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                 CLASSIFICATION: LDM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, ver APPLICATION DATA: APPLICATION NUMBER: US/08/050,319B FILING DATE: 10-May-1993 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 49, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 49, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    710 AACACCGTCTGC 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361 AACACCGTGTGC 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301 TGCTTCAATTGCAGCCTCTGCCTCCAATGGGACCGTGCACCTCTCCTGCCAGGAGAAACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241 ACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTTTTCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             470 GAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTCAGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 GAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCCACCTCAGACACTGCCTCAGCTGC
TELEFAX: (415) 327-32 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 530 TCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGACCGGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 TCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTGCACAGTGGACCGGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      410 CACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGACTGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  350 GTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACCAAGTGC 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 CACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGACTGCAGG
                                         TELECOMMUNICATION INFORMATION: TELEPHONE: (415) 617-8999
                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: ROBBINS, ROBERTS, 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTTTTCCAG
                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 94301
                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAGAAACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Reed & Robbins
  49:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
```

474 base pairs

```
RESULT
ID US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       នននិននិង
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                       Sequence 5, Application US/08273411
Patent No. 5625124
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-273-411-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCATION: 1..471
Sequence 474 BP; 110 A; 126 C; 132 G; 106 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                           Sequence 5, Application US/08273411.
                                                                                                                                                                                                                                                                                                                                                                                       01-JAN-1900
                                                                          COMPUTER READABLE FORM:

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IBM PC COMPUTER:

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, VI

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               118 AGAGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTCAGC 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Match 30.1%;
Local Similarity 98.3%;
                                                                                                                                                                                                                                             APPLICANT: Falk, Per APPLICANT: Gordon, Jeffrey I. TITLE OF INVENTION: Animal Model TITLE OF INVENTION: Disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear MOLECULE TYPE: cDNA to FEATURE:
ATTORNEY/AGENT INFORMATION:
NAME: Pabst, Patrea L.
REGISTRATION NUMBER: 31,
                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGAACACCGTGTGCACCTGCCATGCAGGTTTCTTTCTAAGAGAAAACGAGTGTGTCTCC 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCCTGCCAGGAGAAA 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACACCGTGTGTGGGTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAAACCTTTTC 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGACCGG 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTTAG 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGTGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAGAAA 706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGACCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTCAGC 526
                                       CLASSIFICATION: 435
                                                   APPLICATION NUMBER: FILING DATE:
                                                                                                                                                               COUNTRY:
                                                                                                                                                                               CITY: Atlanta
STATE: Georgia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGAACACCGTCTGCACCTGCCATGCAGGTTTCTTTCTAAGAGAAAAACGAGTGTGTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACACCGTGTGGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY:
                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    351;
                                                                                                                                                                              Georgia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                     1100 Peachtree Street,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD; DNA; UNC; 2771 BP
                                                                                                                                                                                                                   Patrea L. Pabst
                                                               US/08/273,411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 345; DB 7;
Pred. No. 6.94e-267
0; Mismatches 6
                                                                                                                                                                                                       Suite 2800
                                                                                                                                                                                                                                                                   for Gastro-Intestinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           646
```

```
밁
                                                                                                              Ş
                                                                                                                                                   Ş
                                                                                                                                                                                        Š
                                                                                                                                                                                                                              δô
                                                                                                                                                                                                                                                 밁
                                     Š
                                                        밁
                                                                                                                                  밁
                                                                                                                                                                       밁
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                           RESULT 11
ID US-08-343-401A-3
                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: WU10
TELECOMMUNICATION INFORMATION:
TELEPHONE: (404) 815-6508
TELEPAX: (404) 815-6555
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                         RELEVANT RESIDUES IN SEQ ID NO: Sequence 2771 BP; 666 A; 718 C; 704 G;
                                     306
                                                                          246
                                                                                            916
                                                                                                               186
                                                                                                                                  856
                                                                                                                                                    126
                                                                                                                                                                      798
                                                                                                                                                                                                           740
                                                                                                                                                                                                                             680 ATGGCTACAGGTAAGCGCCCCTAAAATCCCTTTGGGCACAATGTGTCCTGAGGGGAGAGG 739
                                                                                                                                                                                         66
                                                                                                                                                                                                                                                                                                                                                                                                                                          RELEVANT RESIDUES IN SEQ
PUBLICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                      RELEVANT RESIDUES IN SEQ ID PUBLICATION INFORMATION: AUTHORS: Sweetser, et al. JOURNAL: J. Biol. Chem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PUBLICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE:
                                    GCCTGCTCTGCCTGCCTTGGCTTCAAGAGGGCAGTGCC 1013
                                                                                                                          GGAGAGAGAAAAAAAAAAACAAACAGCTCCTGGAGCAGGGAGAGAGTGCTGGCCTCTTGCTCTCCGGC
                                                                                                                                                  JOURNAL:
VOLUME:
                                                                                                               GGAGAGAAAAAACAAACAGCTCCTGGAGCAGGGACACTCCTGGCCTCTTGCTCTGCGGC
                                                                                                                                                                                                                                                                                                                            VOLUME: 261
PAGES: 5553-5561
DATE: 1986
                                                                         TCCGTGTGTTGCCCTGTGGTTTCTCCCCACGCTCCCGGACGTCCCTGCTCCTGGCTTTTG
                                                                                            TCCCTCTGTTGCCCTCTGGTTTCTCCCCAGGCTCCCGGACGTCCCTGCTCCTGGCTTTTG
                                                                                                                                                                                                                                                                                                                                                                                             PAGES: 239-249
DATE: 1982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAGES: 131
DATE: 1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                   ch 25.1%;
l Similarity 95.6%;
323; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1318-1332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2771 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genes &
                                                                                                                                                                                                                                                                                                                                                                                                                                  Seeburg, et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sweetser,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ĕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dev
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     et al
                                                                                                                                                                                                                                                                   Score 288; DB 7; Length 2771 Pred. No. 8.12e-218; 0; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WU106
                                                                                                                                                                                                                                                                                                                                                                                    ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>8</u>
                                                                                                                                                                                                                                                                                                         5: FROM 1 TO 617; 683 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                   <u>ა</u>
                                                                                                                                                                                                                                                                                                                                                                                   FROM 620
                                                                                                                                                                                                                                                                                                                                                                                                                                                      FROM 561 TO
                                                                                                                                                                                                                                                                                      Length 2771;
                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                    4.
                                                                                                                                                                                                                                                                    Gaps
                                                                                            975
                                                                                                                                 915
                                                                          305
                                                                                                              245
                                                                                                                                                                                                                                                                     Ψ
```

01-JAN-1900

XXXXX

STANDARD;

DNA;

UNC;

Sequence

Application US/08343401A.

```
Ş
                                                                                          밁
                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                            γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \mathbb{R} \mathbf{x} \cap \mathbf{
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 25.0%; Score 287; DB 7; Length 4283; Best Local Similarity 93.2%; Pred. No. 5.86e-217; Matches 315; Conservative 0; Mismatches 22; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: sig_peptide
LOCATION: 713..1049
Sequence 4283 BP; 1023 A; 1095 C; 1114 G; 1051 T; 0 other:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 53701-2113

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION UNMBER: US/08/343,401A
FILING DATE: 22-NOV-1994
CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 3, Application US/08343401A Patent No. 5661132
                                                                                          832
                                                                                                                                                                                                                                                                   772
                                                                                                                                                                                                                                                                                                                                                                                         713 ATGGCTACAGGTAAGCGCCCCTAAAATCCCTTTGG-CACAATGTGTCCTGAGGGGAGAGG 771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 608-251-9166
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 4283 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:

NAME: Seay, Nicholas J

REGISTRATION UNMBER: 27,386

REFERENCE/DOCKET NUMBER: 11-2

TELECOMMUNICATION INFORMATION:

TELEPHONE: 608-251-500
                                                                                                                                                                                 66
                                                                                                                                                                                                                                                                                                                                                     σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Andree, Christophe
TITLE OF INVENTION: Improved Wound Healing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IMMEDIATE SOURCE:
CLONE: pWRG1630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE:
                                                                                                                                                                                                                     CAGCGACCTGTAGATGGGACGGGGGCACTAACCCTCAGGGTTTGGGGTTCTGAATGTGAG 831
                                                                                                                                                                                                                                                                                                                                            NAME/KEY:
LOCATION:
                                                                             TATCGCCATCTAAGCCCAGTATTTGGCCAATCTCAGAAAGCTCCTGGCTCCCTGGAGGAT 891
                                                                                                                                                                   CAGCGACCTGTAGATGGGACGGGGCACTAACCCTCAGGTTTGGGGGCTTTTGAATGTGAG 125
TATGGCCATGTAAGCCCAGTATTTGCCCCAATCTCAGAAAGCTCCTGGTCCCTGGAGGGAT 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: circular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Madison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ¥Η
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PO Box 2113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Swain, William F
Macklin, Michael D
Eriksson, Elof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     exon
713..721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 exon
981..1253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  join(713..721, 981..1253)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Quarles & Brady
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-229-9103-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ļ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
```

```
Š
                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
                                             Query Match
Best Local S
Matches 31
                                                                                Sequence 1, Application US/08445265A Patent No. 5697901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-445-265A-1 STANDARD; DNA; UNC; 4283 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/08445265A.
                       713
                                                                                                                                                                                                            TELEFAX: 608-251-9166
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            306 GCCTGCTCTGCCTGCCCTGCCTTCAAGAGGGCAGTGCC 343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL
                                            Match 25.0%;
Local Similarity 93.2%;
les 315; Conservative
                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATAING
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARRE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/445,265A
FILING DATE:
FILING DATE:
 σ
                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                  CLASSIFICATION: 604
ATTORNEY/AGENT INFORMATION:
NAME: Seay, Nicholas J
REGISTRATION NUMBER: 273
                                                                                                                                     MOLECULE TYPE: other nucleic acid DESCRIPTION: /desc = "Plasmid DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Eriksson, Elof
TITLE OF INVENTION: GENE DELIVERY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGAGAGAGAAAAACAAACAACTCCTGGAGCAGGGAGAGTGTTGGCCTCTTGCTCTCCGGC
                      ATGGCTACAGGTAAGCGCCCCTAAAATCCCTTTGG-CACAATGTGTCCTGAGGGGAGAGG 771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCTGCTCTGCCTGGCTTCAAGAGGGCAGTGCC 1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCGTGTGTTGCCCTGTGGTTTCTCCCCACGCTCCCGGACGTCCCTGCTCCTGGCTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCCTCTGTTGCCCTCTGGTTTCTCCCCAGGCTCCCGGACGTCCCTGCTCCTGGCTTTTG 1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGAGAGAAAAAACAACCTCCTGGAGCAGGGACACTCCTGGCCTCTTGCTCTGCGGC
ATGGCTACAGGTAAGCGCCCCTAAAATCCCTTTGGGCACAATGTGTCCTGAGGGGAGAGAG
                                                                                                                                                                           TYPE: nucleion STRANDEDNESS:
                                                                                                                                                                                                                         TELEPHONE: 608-251-9166
                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 53703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Quaries a Ling.
STREET: 1 South Pinckney Street
                                                                                                                                                                TOPOLOGY: circular
                                                                                                                                                                                                 LENGTH: 4283 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION:
                                                                                                                                                                                     nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                    WH
                                                                                                                                                                                                                                                                                                                                                                                                                                         SD
                                                                                                                                                                                                                                                 608-251-5000
                                                                                                                                                                            double
                                         Score 287; DB 7; Len, Pred. No. 5.86e-217;
                                                                                                                                                                                                                                                                                  27386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BY MICRONEEDLE INJECTION
                                                                                         1051 T; 0 other;
                                                                   Length 4283;
                                             Indels
                                             ۲.
                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       245
```

```
δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
NAME/KEY: CDS
LOCATION: 1..474
Sequence 477 BP; 117 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL M. Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
TITLE OF SECUENCES: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-050-319B-53 STANDARD; DNA; UNC; 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1012 GCCTGCTCTGCCTGCCTTGCCTTCAAGAGGGCAGTGCC 1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 53, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 53, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, vers
APPLICATION DATA:
APPLICATION UMBER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: ROBBINS, ROBERTA L.
REGISTRATION NUMBER: 33,208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    246
                                                                                                    TELEPHONE: (415) 617-8999
TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 53:
SEQUENCE CHARACTERISTICS:
LENGTH: 477 base pairs
TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66
                                                                                                                                                                                                                                                                                                                        ZIP: 94301

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy of COMPUTER: IBM PC comp
                                                                                                                                                        TELECOMMUNICATION INFORMATION: TELEPHONE: (415) 617-8999
                                         MOLECULE TYPE: FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATCGCCATCTAAGCCCAGTATTTGGCCAATCTCAGAAAGCTCCTGGCTCCCTGGAGGAT 891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGCGACCTGTAGATGGGACGGGGGCACTAACCCTCAGGGTTTGGGGGTTCTGAATGTGAG
                                                                                                                                                                                                                                                                                                                                                                                        STREET: 635 Bryant Street
CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCTGCTCTGCCTGCCCTGCCTTCAAGAGGGCAGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCCTCTGTTGCCCTCTGGTTTCTCCCCAGGCTCCCGGACGTCCCTGCTCCTGGCTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAGAGAGAAAAACAAACAACCTCCTGGAGCAGGGAGAGTGTTGGCCTCTTGCTCTCCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCGTGTGTTGCCCCTGTGGTTTCTCCCCACGCTCCCGGACGTCCCTGCTCCTCGCTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGAGAAAAAACAACCTCCTGGAGCAGGGACACTCCTGGCCTCTTGCTCTGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATGGCCATGTAAGCCCAGTATTTGCCCAATCTCAGAAAGCTCCTGGTCCCTGGAGGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGCGACCTGTAGATGGGGCACGGGGCACTAACCCTCAGGTTTGGGGGCTTTTGAATGTGAG
                                                                  TOPOLOGY:
                                                                           STRANDEDNESS: double
                                                                                           TYPE: nucleic acid
                                                                                                                                                                                    REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                   Reed & Robbins
                                                                                                                                                                                                                                                                                                                                     Floppy disk
                                                    cDNA to mRNA
 122 C; 131 G; 107 T;
                                                                                                                                                                                                                                                                                               version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                343
0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                125
```

```
RESULT
ID US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
Query Match 22.2%;
Best Local Similarity 98.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                              NAME: ROBBINS, ROBERTA L.

REGISTRATION NUMBER: 33,208

REFERENCE/DOCKET NUMBER: 5150

TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999

TELEPHONE: (415) 327-3231

INFORMATION FOR SEQ ID NO: 51:
SEQUENCE CHARACTERISTICS:
LENGTH: 462 base pairs
TYPE. N. 1615 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-050-319B-51 STANDARD; DNA; UNC; 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 51,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 51, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                      ZIP: 94301
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                          STREET: OJ.
STREET: Palo Alto
CITY: Palo Alto
CTATE: California
                                                                                                                                                                                                                                                                                                                                                              APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                 SOFTWARE: Patentin Release #1.0, version CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/050,319B FILING DATE: 10-May-1993
                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 5
                                                                                                                                          ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGACACCGTGTGTACCTGC 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGACACCGTGTGTGGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATAGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
        TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                       CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        258;

    Application US/08050319B
5633145

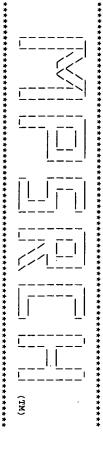
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                               635 Bryant Street
                                                                                                                                                                                                                                                                                                                            Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 255; DB 7; 1
Pred. No. 1.56e-189,

 Mismatches

                                                                                                         5150-0030
                                                                                                                                                                                                       #_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ន្តន្តន្តន
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
ID US-08-187-756C-3 STANDARD; DNA; UNC; 534 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 18.6%;
Best Local Similarity 97.8%;
Matches 218; Conservative
       FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: FERANCO, GREGORY D.
REGISTRATION NUMBER: 36,134
REFERENCE/DOCKET NUMBER: 325800-55
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-994-1700
TELEPAX: 201-994-1744
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: CDS
LOCATION: 1..459
Sequence 462 BP; 116 A; 119 C; 121 G; 106 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                         Sequence 3, Application US/08187756C Patent No. 5597709
                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 3, Application US/08187756C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240 CTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTTTTCCAGTGCTTCAATTG 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601 CTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTTTTCCAGTGCTTCAATTG 660
                                                                                                                APPLICATION NUMBER: US/08/187,756C FILING DATE: January 27, 1994 CLASSIFICATION: 435 PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                     COMPUTER: IBM PS/2
OPERATING SYSTEM: MS-DOS
SOFTWARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 INCH DISKETTE
                                                                                                                                                                                                                                                                                                                 APPLICANT: ROSEN, ET AL.
TITLE OF INVENTION: Human Growth Hormone
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: cDNA to FEATURE:
                                                                                                                                                                                                                                                             CITY: ROSELAND
STATE: NEW JERSEY
                                                                                                                                                                                                                                                                                  ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLAN, ADDRESSEE: CECCHI, STEWART & OLSTEIN STREET: 6 BECKER FARM ROAD
                                                                                                                                                                                                                                                   COUNTRY:
534 BASE PAIRS
                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 213; DB 7;
Pred. No. 1.02e-153
0; Mismatches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
Ş
                                                                                                                                                                                                                   ន្តន្តន្តន្ត
                                                     ş
                                                                               밁
                                                                                                                                  밁
Search completed: Wed May Job time: 87 secs.
                                                                                                                                                             Matches
                                                                                                                                                                           Query Match
Best Local :
                                                                                                                                                                                                            TYPE: NUCLEIC ACID
STRANDEDNESS: SINGLE
TOPOLOGY: LINEAR
MOLECULE TYPE: CDNA
Sequence 534 BP; 108 A; 166 C; 143 G; 117 T; 0 other;
                                                                                                       273 CACGCTCCCGGACGTCCCTGCTCTGGCTTTTGGCCTGCTCTGCCTGGCCTGCCTGCAAG 332
                                                     333 AGGGCAGTGCC
                                                                    68 AGGGCAGTGCC
                                                                                                                                                          Match 5.8%;
Local Similarity 97.2%;
les 69; Conservative
                                                                                                                                  8 CAGGCTCCCGGACGTCCCTGCTCCTGGCTTTTGGCCTGCTCTGCCTGTCCTGGCTTCAAG
                                                     343
                                                                             78
              6 10:57:34 1998
                                                                                                                                                          Score 67; DB 6; L
Pred. No. 4.70e-33;
0; Mismatches 2
                                                                                                                                                                                   Length 534;
                                                                                                                                                             Indels
                                                                                                                                                             0
                                                                                                                                                           Gaps
                                                                                                                                  67
                                                                                                                                                             0
```



Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

Run on: MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm

Tabular output not generated. Wed May 6 08:20:59 1998; MasPar time 4.78 Seconds 367.559 Million cell updates/sec

Description: Perfect Score: Sequence: >US-08-804-166-4 (1-307) from US08804166.pep 2341

1 SRTSLLLAFGLLCLPWLQEG......PSLPSPSRLPGPSDTPILPQ 307

Scoring table: PAM 150 Gap 11

Searched: 62627 seqs, 5720858 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database:

a-issued 1:backl 2:51 3:52 4:53 5:54 6:55 7:56 8:57 9:PCT90 10:PCT91 11:PCT92 12:PCT93 13:PCT94 14:PCT95 15:PCT96

Statistics: Mean 30.606; Variance 140.802; scale 0.217

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

. 22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	· UT	4	ω	N	1	Result
318	324	339	477	613	651	666	584	714	734	740	800	981	996	996	995	1020	1025	1025	1115	1124	1124	Score
13.6	13.8	14.5					29.2	•		•	•	•		•	42.5	43.6		43.8	47.6	48.0	48.0	Query Match
43	40	41	153	149	117	158	114	117	114	114	157	124	167	167	145	145	145	145	199	455	455	Length
7	7	7	7	თ	6	7	σ	σ	σ	σ	7	7	7	7	σ	7	σ	σ	7	7	7	BB
US-08-050-	US-08-050-	US-08-050-	US-08-050-	US-08-425-	US-08-425-	US-08-050-	US-08-425-	US-08-425-	US-08-425-	US-08-425-	US-08-050-	US-08-050-	US-08-050-	us-08-050-	US-08-425-	US-08-298-	US-08-425-	US-08-425-	us-08-050-	US-08-050-	US-08-321-	ij
Sequence 31	Sequence 26	Sequence 36		Sequence 5,	Sequence 12	Sequence 54	Sequence 8,	Sequence 11	Sequence 7,	Sequence 9,	Sequence 50	Sequence 4,	Sequence 2,	Sequence 57	Sequence 10	Sequence 1,	Sequence 1,	Sequence 2,		Sequence 25	Sequence 2,	Description
•	•	•	•	'n	, Applicati	•	~	, Applicati	Applicatio	Applicatio	, Applicati	Applicatio	Applicatio	, Applicati	, Applicati	Applicatio	Applicatio	Applicatio	, Applicati	, Applicati	Applicatio	1 1 1 1 1 1 1 1
4.28e-18	1.29e-18	6.36e-20	4.02e-32	2.38e-44	.62e-	.76e-4	.72e-		2.47e-55	.01e-	2.36e-61	6.07e-78	.54e-7	.54e-7	3.13e-79	1.57e-81	.45e-	5.45e-82	.79e-	4.13e-91	4.13e-91	Pred. No.

8888888888888888888888888888888888888	RES ID XX AC XX XX	
ဌ ရို စို	. T Q Y	4400887655443
quence 2, Apitent No. 566 ENERAL INFOR APPLICANT: APPLICANT: APPLICANT: APPLICANT: TITLE OF IN NUMBER OF S CORRESPONDE ADDRESSEE STREET: CITY: APITENT OF IN NUMBER OF IN COMPUTER RE MEDING SOFTMARE: OPERATING DA CLASSIFIC PRIOR APPLICATI APPLICATI APPLICATI APPLICATI APPLICATI APPLICATI APPLICATI REFERENCE PILING DA ANTORNEY/AG NAME: BR REGISTRAIL REFERENCE TELEPAX: TELEFAX: TELEFAX: TELEFAX: TELEFAX:	21-	296 287 2887 2887 260 260 249 249 249 227 227 227 227 227 227 227 227 227 22
Por state of the contract of t	6 8899	11111111111111111111111111111111111111
Plication US 5859 WALLACH, Da BRAKEBUSCH, VARFOLOMEEV BATKIN, Mic VENTION: MO VENTION: TH EQUENCES: BROWDY AN 419 Seventh shington C.C. USA 04 ADABLE FORM: PE: Floppy IBM PC COM SYSTEM: PC PATENION DATA ON NUMBER: TE: 12-CCT SATION DATA: ON NUMBER: TE: 12-CCT SATION DATA: ON NUMBER: TE: 12-CCT CON UNUMBER: TE: 12-CCT	355 5 41 1 41 1 355 5 355 5 37AND	1111 6 1111 6 1111 6 146 5 146
08321 Cord Cord Cord Cord Neighbors The	5395760 US-08-2: 5451527 5451527 5451527 ALIGNMEI	5451527- US-08-42 US-08-08-08 US-08-08-08 S177193- S17818-08-08 S17818-08-08 S17818-08-08 S17818-08-08 US-08-08 US-08-08 US-08-08 US-08-08 US-08-08
PIORS, THEIR PREPARATION  A., Suite 300  A., Version #1.30  568	Patent No. Sequence 6 Patent No.	1 Patent No. 5451527. 5- Sequence 3, Applicatio 5- Sequence 4, Applicatio 6- Sequence 6, Applicati 6- Sequence 12, Applicati 6- Sequence 12, Applicati 6- Sequence 13, Applicati 6- Sequence 17, Applicati 6- Sequence 17, Applicati 6- Sequence 17, Applicati 6- Sequence 20, Applicati 6- Sequence 20, Applicati 7- Patent No. 5451527. 12 Patent No. 5451527. 13 Patent No. 5451527. 14 Patent No. 5451527. 15 Sequence 29, Applicatio 16 Sequence 20, Applicatio 17 Sequence 20, Applicatio 18 Sequence 20, Applicatio 20 Sequence 4, Applicatio 21 Sequence 4, Applicatio 22 Sequence 4, Applicatio 23 Sequence 4, Applicatio 24 Sequence 4, Applicatio 25 Sequence 4, Applicatio 25 Sequence 5, Applicatio 27 Sequence 6, Applicatio 28 Sequence 15, Applicatio
AND THEIR USE	4.59e-0 6.72e-0 8.14e-0 8.14e-0	3.43e-16 2.04e-15 5.04e-15 5.04e-15 8.68e-14 4.17e-13 3.43e-13 3.59e-12 3.59e-12 3.59e-12 1.44e-10 2.57e-10 2.57e-10 2.57e-10 3.78e-10 3.78e-10 3.78e-10 3.78e-10 3.78e-10 3.78e-10 3.78e-10 3.78e-10 3.78e-10 3.78e-10

```
문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     និនិនិនិនិនិ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                             MEDIUM TYPE: Floppy disk
COMPUTER: LBM PC compatible
COMPUTER: CBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version #1.
APPLICATION DATA:
APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECHONE: (415) 617-8999
TELEPHONE: (415) 327-3231
INFORMATION FOR SEQ ID NO: 25:
SEQUENCE CHARACTERISTICS:
LENGTH: 455 amino acids
  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-050-319B-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 25, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 25, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101 SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          143 KONTYCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   161 KONTYCTCHAGFFLRENECYSCS 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83
                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQQDTDCRECESGSFTASENHLRHCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
LENGTH: 455 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
 MOLECULE TYPE: protein
JENCE 455 AA; 50579 MW; 1048388 CN;
                                                                                                                                                                                                                                                                                                                                                        APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: protein
JENCE 455 AA; 50494 MW; 1048031 CN;
                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                      TYPE: amino acid
                                                                                                                                                                                                                                                                                                   CITY: Palo Alto
STATE: Californ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                         STREET:
                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      142; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               h 48.0%;
Similarity 99.3%;
                                                                                                                                                                                                                                                                              94301
                                                                                                                                                                                                                                                                                                   California
                                                                                                                                                                                                                                                                                                                        635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               455 amino acids
                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                     Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1124; DB 7; Length 455; Pred. No. 4.13e-91; 1; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            455
                                                                                                                                                                                                                #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
Ş
                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                           Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local :
                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, vers
SOFTWARE: Patentin Release #1.0, vers
CURRENT APPLICATION DATM:
APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 435
CLASSIFICATION: 10-May-1993
CLASSIFICATION: NOPERTA L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
REFERENCE/DOCKET NUMBER: 308-0030
REFERENCE/DOCKET NUMBER: 310-0030
REFERENCE/DOCKET NUMBE
                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-050-319B-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 48, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:

APPLICANT: M.Feldmann, P.W. Gray,

APPLICANT: M.J.C. Turner, F.M Brennan

TITLE OF INVENTION: Modified human TNFalpha (Tumor

TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 48, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      143 KONTYCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              161 KQNTVCTCHAGFFLRENECVSCS 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101 SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83 SCSKCRKEMGQVEISSCTVDRDTVCGCRXNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41 DSYCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                             41 DSVCPTGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: STREET: Palo Alto
CITY: Palo Alto
CTATE: California
TRA
                                                                                                                                                                                                       LENGTH: 199 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     w
DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    h 48.0%;
Similarity 99.3%;
                                                                                                              Similarity
                                                                                                                                                                                 199 AA; 22186 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94301
                                                                                           47.6%;
larity 98.6%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                        Score 1115; DB 7;
Pred. No. 2.79e-90;
1; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 1124;
Pred. No. 4
                                                                                                                                                                                 195553 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1124; DB 7;
No. 4.13e-91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A
                                                                                                                                    Length 199;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Receptor
                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82
                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

S

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뭥
               밁
                                                           밁
                                                                                          Query Match
Best Local
                                                                                 Matches
                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2, Application US/08425673.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-425-673-2
                                     169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2, Patent No. 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                161
                                                                                         Match 43.8%;
Local Similarity 99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
67 IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                  TELEFAX: (609) 466-276
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                            7 PRCRPINATLAVEKEGCPVCITVNITICAGYCPTMTRVLQGVLPALPQVVCNYRDVREES
                                                                                                                                                             TYPE: amino acids
TOPOLOGY: 11--
                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/425,673 FILING DATE: CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Moyle, William R.
APPLICANT: Campbell, Robert K.
TITLE OF INVENTION: Analogs of Glycoprotein Hormones Having
TITLE OF INVENTION: Altered Receptor Binding Specificity and Activity and
TITLE OF INVENTION: Methods For Preparing and Using Same
                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                MOLECULE TYPE:
HYPOTHETICAL:
                                                                                                                                                                                                                                          TELEPHONE: (609) 466-3407
                                                                                                                                       ANTI-SENSE:
                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KONTVCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KQNTVCTCHAGFFLRENECVSCS 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
                                                                                                                                                                                                                                                                NAME: Muccino, Richard R.
REGISTRATION NUMBER: 32,538
REFERENCE/DOCKET NUMBER: UMD 1.0-004
                                                                               138;
                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US C
FILING DATE: 18-JUN-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                            145 AA; 15544 MW; 114662 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 08551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , Application US/08425673 5508261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Princeton
                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            р.
О.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                               (609) 466-2760
                                                                                                                                        NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Richard R. Muccino
                                                                                                                                               ,; peptide
NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Box 1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                         Score 1025; DB 6;
Pred. No. 5.45e-82;
                                                                               0; Mismatches
                                                                                                                                                                                                                    2
                                                                                                                                                                                                                                                                                                                        07/717,151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             À
                                                                                                     Length 145;
                                                                               Indels
                                                                               0;
                                                                               Gaps
                                                         66
                                                                               0
```

```
õ
                    밁
                                       Ş
                                                             밁
                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                 Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-425-673-1
                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Application US/08425673.
  229
                                         169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          229 IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No.
                    67
                                                                                  Local Similarity
les 138; Conser
                                                                                                                                                                                               TELEFAX: (609) 466-2760 INFORMATION FOR SEQ ID NO: 1: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                              7
                                                                                                                       HYPOTHETICAL: NO
ANTI-SENSE: NO
JENCE 145 AA; 15544 MW; 114662 CN;
                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: UM
TELECOMMUNICATION INFORMATION:
TELEPHONE: (609) 466-3407
                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: ME NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                      MOLECULE TYPE:
                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US 0
FILING DATE: 18-JUN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRES
                                                   PRCRPINATLAVEKEGCPVCITVNITICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SLPSPSRLPGPSDTPILPQ 145
          IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SLPSPSRLPGPSDTPILPQ 307
                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: 1
                                                                                                                                                                                                                                                              NAME: Muccino, Richard R. REGISTRATION NUMBER: 32,538
                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                        LENGTH:
                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                 43.8%;
llarity 99.3%;
Conservative
                                                                                                                                                                             amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Princeton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/08425673
                                                                                                                                                                                                                                                                                                                                                                                                                                               New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P.O.
                                                                                                                                                                                        145 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Moyle,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Campbell,
                                                                                                                                                                  linear
                                                                                                                                              : peptide
NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Richard R. Muccino
O. Box 1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      William R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1, Robert K.
Analogs of Glycoprotein Hormones Having
Altered Receptor Binding Specificity and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Methods
                                                                                                                                                                                                                                                                                                                                                                      Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                    US/08/425,673
                                                                                 Score 1025; DB 6;
Pred. No. 5.45e-82;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                          07/717,151
                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           For Preparing and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                      1.0-004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₽
                                                                                                      Length 145;
                                                                                  Indels
                                                                                  0
                                                                                  Gaps
                                         228
                                                            66
288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Activity
                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
```

밁

127

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                        Matches
                                              Query Match
                                                                    DATE:
SEQUENCE 1
                                                                                                                                                                                                                                                          ATTORNET/AGENT INFORMATION:

NAME: Brian D. Voyce
REGISTRATION NUMBER: 28,917
REFERENCE/DOCKET NUMBER: DSI1
TELECOMMUNICATION INFORMATION:
TELEPAN: 919-638-3939 or 803-272-1471
TELEFAX: 919-638-3939 or 803-272-1471
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 145 mmino acids
TYPE: amino acid
STRANDEDNESS: NO. 5674727 applicable
TOPOLOGY: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-298-189B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1, Application US/08298189B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JAN-190C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             XXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No
GENERAL I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                289
                                    Local
7 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: ITTLE OF INVENTION: ITTLE OF INVENTION: INVENTION: ITTLE OF SEQUENCES:
                                                                                                                                                  IDENTIFICATION METHOD: N-1
PUBLICATION INFORMATION:
AUTHORS: Keutmann et alia
                                                                                                                                                                                                                                    MOLECULE TYPE: subunit of hormone, specifically MOLECULE TYPE: beta\subunit of hCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible OPERATING SYSTEM: Windows 95 SOTTWARE, MACINGOIGH TOOL CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" di
                                                                                                                                                                                                                ORIGINAL SOURCE: FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SLPSPSRLPGPSDTPILPQ 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SLPSPSRLPGPSDTPILPQ
                                                                                           ISSUE:
                       al Similarity
137; Conser
                                                                                                                  AUTHORS: Keutmann et Line TITLE: "A Receptor-binding Region TOURNAL: Proc Nat'l Acad Sci USA
                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: FILING DATE: 08/31/CLASSIFICATION: 435
                                                                                                                                                                                         NAME/KEY: beta subunit of hCG that is nicked by GBNE LOCATION: hCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION:
                                                                     145 AA; 15476 MW; 116769 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , Application US/08298189B
5674727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New Haven
                     43.68;
llarity 98.68;
Conservative
                                                                                            No. 5674727 applicable 2038-2042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Connecticut
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 333 Cedar Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dr.
                                                                                                                                                                                                                                                                                                                                                                                                                           08/31/94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Laurence A. Cole and Dr. Andrew Kardana ION: No. 5674727el Methods for Detectin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                           human urine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Laurence A. Cole , c/o Dept. of Obstetrics and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cancers or Tumors and Assay Products
                                                                                                                                                                                                                                                                                                                                                                                                                                       US/08/298,189B
                     Score 1020; DB 7; I
Pred. No. 1.57e-81;
2; Mismatches 0;
                                                                                                                                                                             N-terminal sequence analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                         in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  145
                                                                                                                                         Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for Detecting Reproductive
                                             Length 145;
                       Indels
                                                                                                                                        Choriogonadotrophin/Lutop
                       0,
                     Gaps
                       0
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
            밁
                                  Matches
                                              Query Match
Best Local
                                                                              MOLECULE TYPE:
HYPOTHETICAL: N
ANTI-SENSE: NO
SEQUENCE 145 AA; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-425-673-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 10, Application US/08425673.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     127 SLPSPSRLPGPSDTPILPQ 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 169 PRCRPINATLAVEKESCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67
                                 Local Similarity
les 134; Conser
                                                                                                                                                             TELEFAX: (609) 466-276
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
             7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Moyle, William R.
APPLICANT: Campbell, Robert K.
TITLE OF INVENTION: Analogs of Glycoprotein Hormones Having
TITLE OF INVENTION: Altered Receptor Binding Specificity and
TITLE OF INVENTION: Methods For Preparing and Using Same
                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: UM
TELECOMMUNICATION INFORMATION:
TELEPHONE: (609) 466-3407
                                                                                                                                                                                                                               APPLICATION NUMBER: US 0
FILING DATE: 18-UUN-1991
ATTORNEY/AGENT INFORMATION:
NAME: MUCCINO, RICHARD RECISTRATION NUMBER: 32,
                                                                                                                                                                                                                                                                                                                         SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/425,673
                                                                                                                                                                                                                                                                                        CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
PRCRPINATLAVEKEGCPVCITVNITICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SLPSPSRLPGPSDTPILPQ 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IRLPGCPRGVNPVVSYAVALSCQCALCKKSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP
                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 0855
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Richard R. Muccino
STREET: P.O. Box 1267
                                                                                                                                                 LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0, Application US/08425673
5508261
                                 42.5%;
llarity 96.4%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                          Princeton
                                                                                                                                       amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                New Jersey
                                                                                                                                                    145 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                          ĕ
                                                                                                                            linear
                                                                                                       ž
                                                                                15448 MW; 114931 CN;
                                                                                                                peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD
                                                                                                                                                                                     466-2760
                                                                                                                                                                                                                                 32,538
                                Score 995; DB 6;
Pred. No. 3.13e-79;
1; Mismatches 4
                                                                                                                                                                                                                                                æ
                                                                                                                                                                                                                                                                               07/717,151
                                                                                                                                                                                                                      UMD 1.0-004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ⋛
                                  ..
                                                       Length 145;
                                  Indels
                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Activity
                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
```

Š

169 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRPES

ş

밁

8 B

```
Query Match 42.5%;
Best Local Similarity 100.0%;
Matches 127; Conservative
                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: ROBBITS, ROBERTA L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
RELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-899
TELEPAX: (415) 327-3331
INFORMATION FOR SEQ ID NO: 57:
                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 57, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-050-319B-57
                                                              101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 57, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         229
 143
                     161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Negrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                67
                                            83
                                                                                                 41 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                                                                      23
                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/
FILING DATE: 10-May-199
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 94301
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS
                                                                                                                                                                         MOLECULE TYPE: protein pence 167 AA; 18626 MW; 139513 CN;
                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 167 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
            KQNTVCT 167
                                                                                                                                                                                         TOPOLOGY: line
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SLPSPSRLPGPSDTPILPQ 307
                                                                                      DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SLPSPSRLPGPSDTPILPQ 145
                                           SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: Palo Alto
STATE: Californ
                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  California
                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                   10-May-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                US/08/050,319B
                                                                                                                                Score 996; DB 7;
Pred. No. 2.54e-79;
0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                167
                                                                                                                                 0;
                                                                                                                                                      Length 167;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
                                                                                                                                 Indels
                                                                                                                                 0
                                                                                                                                 Gaps
                                                                                                                                 0
                              RESULT
ID US
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
ID US
                                                                                    Š
                                                                                                                                δõ
                                                                                                                                                     ď
                                                                                                                                                                            δÃ
                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                  Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   XXXXXX
01-JAN-1900
                      XXXXX
                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                      143
                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent No.
                                                                                                                                 83
                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                LENGTH:
```

8 8

B 6 B

```
US-08-050-319B-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-050-319B-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 2, Application US/08050319B
                                                                                        161 KQNTVCT 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 2, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                 23 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                     41 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (415) 327-32
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIDY TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version
                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: protein JENCE 167 AA; 18626 MW; 139513 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: Robbins, Roberta L
REGISTRATION NUMBER: 33,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/050,319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: Palo Alto
CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEFAX: (415) 327-3231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: Modified human TNFalpha (Tumor TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
                                                                                                                                         KONTVCT 149
                                                                                                                                                                             SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                 127; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 10-May-1993
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                     167 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      M.J.C. Turner, F.M Brennan TNFalpha (Tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            M.Feldmann,
                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P.W. Gray,
er, F.M Brennan
                                                                                                                                                                                                                                                                                       Score 996; DB 7
Pred. No. 2.54e-
0; Mismatches
                                                                                                                                                                                                                                                                                   DB
..54e-79;
0;
                                                                                                                                                                                                                                                                                                                             DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  167
 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
B
                                                                                                                                                                                                                                                                                                                         Length 167;
                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                         Gaps
```

```
RESULT ID US
                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                      Sequence 50, Application
                                                                                                                    01-JAN-1900
                                                                                                                                                                       US-08-050-319B-50
                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: protein SEQUENCE 124 AA; 14047 MW; 75840 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: (415) 617-8999
TELEFAX: (415) 377-3231
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 124 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 4, Application US/08050319B.
 Sequence 50, Application US/08050319B Patent No. 5633145
GENERAL INFORMATION:
APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC COMPATIBLE

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/050,319B

FILING DATE: 10-May-1993

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: PORNITES PORTER!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 4, Applic Patent No. 5633145
                                                                                                                                                                                                                                  145 NTVC 148
                                                                                                                                                                                                                                                            121 NTVC 124
                                                                                                                                                                                                                                                                                     85 SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQ
                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                            25 VCPQGKVIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSC
                                                                                                                                                                                                                                                                                                                                                                                                     Match 41.9%;
Local Similarity 100.0%;
les 124; Conservative
                                                                                                                                                                                                                                                                                                                                                                      1 VCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Robbins, Roberta L.
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 57
CORRESPONDENCE ADDRESS:
ADDRESSEE: Reed & Robbins
                                                                                                                                                                                                                                                                                                                SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQ 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Palo Alto
STATE: California
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              635 Bryant Street
    M.J.C. Turner, F.M Brennan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                          STANDARD;
                                                                                      US/08050319B.
                                                                                                                                                                                                                                                                                                                                                                                                    Score 981; DB 7;
Pred. No. 6.07e-78;
0; Mismatches 0
                                                                                                                                                                          157
                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                              Length 124;
                                                                                                                                                                         ⋛
                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                             84
                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                    0
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                            US-08-425-673-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: ROBBINS, Roberta L.
REGISTRATION NUMBER: 33,208
REFERENCE_TOCKET NUMBER: 5150
TELECOMMUNICATION INFORMATION:
TELECHONE: (415) 617-899
TELECAX: (415) 327-2331
INFORMATION FOR SEQ ID NO: 50:
                                                                                                                                                                                                                                                      Sequence 9, Application US/08425673.
                                                                                                                                                                                                                                                                                     01-JAN-1900
                                                                                                                                                                                                                                                                                                                 XXXXXX
                                                                                                                                                                                                               Sequence 9, Application US/08425673 Patent No. 5508261
                                                                                                                                                                                                                                                                                                                                                                                                    120 ENLFQCFNCSLCLNGTVHLSCQEKQNTVCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: am....
TOPOLOGY: linear
MOLECULE TYPE: protein
MOLECULE 157 AA; 17570 MW; 122247 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         36 DREKRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWS
                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                  96 ENLFQCFNCSLCLNGTVHLSCQEKQNTVCTCHAGFFLRENECVSCS 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                        60 DTDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWS 119
                                                                                                            APPLICANT: Moyle, William R.
APPLICANT: Campbell, Robert K.
TITLE OF INVENTION: Analogs of Glycoprotein Hormones Having
TITLE OF INVENTION: Altered Receptor Binding Specificity and Activity
TITLE OF INVENTION: Methods For Preparing and Using Same
NUMBER OF SEQUENCES: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
 COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Patentin Rel
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
                                                                                                  CORRESPONDENCE ADDRESS:
                                                    STREET: P.O. Bo:
CITY: Princeton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/050,319B FILING DATE: 10-May-1993 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Palo Alto
STATE: California
                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            n 34.2%;
Similarity 96.2%;
102; Conservative
                0855
                                       New Jersey
                                                                   P.O. Box 1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           635 Bryant Street
                             USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patentin Release #1.0,
                                                                                  Richard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Floppy disk
                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Modified human INFalpha (Tumor Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 800; DB 7;
Pred. No. 2.36e-61;
                                                                                   Muccino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5150-0030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              version #1.25
                                                                                                                                                                                                                                                                                                                                            114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    95
```

and

Ş

밁

Ş

밁

밁

MEDIUM TYPE: Floppy disk

```
ş
                                                                                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                Query Match 31.6%;
Best Local Similarity 93.3%;
Matches 97; Conservative
                                                                                                                                                                                                                                                  US-08-425-673-7
                                                                                                                                                                                                Sequence 7, Application US/08425673
                                                                                                                                                                                                                  01-JAN-1900
                                                                                                                                                                                                                                                                                                              229 IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTC
                                                                                                                                                                         Sequence 7, Application US/08425673 Patent No. 5508261
                                                                                                                       GENERAL INFORMATION:
APPLICANT: Mayle, William R.
APPLICANT: Campbell, Robert K.
TITLE OF INVENTION: Analogs of Glycoprotein Hormones Having
TITLE OF INVENTION: Altered Receptor Binding Specificity and
TITLE OF INVENTION: Methods For Preparing and Using Same
                                                                                                                                                                                                                                                                                        67 IRLPGCPRGVNPVVSYAVALSCQCALCDSDSTDCGGPKDHPSYC 110
                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO: 9: SEQUENCE CHARACTERISTICS:
ZIP: 08551

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/425,673
                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE N
HYPOTHETICAL: N
                                                                                                                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER: 32,538
REFERENCE/DOCKET NUMBER: UMD 1.0-004
TELECOMMUNICATION INFORMATION:
TELEPHONE: (609) 466-3407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 18-JUN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
                                                                                                                 NUMBER OF SEQUENCES:
                                                                                STREET: P.O. Bo
CITY: Princeton
                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Muccino, Richard R. REGISTRATION NUMBER: 32,5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                114 AA; 12250 MW; 68564 CN;
                                                                         New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                 114 amino acids
                                                                                         P.O. Box 1267
                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IBM PC
                                                                                                  Richard R.
                                                                                                                                                                                                                                                                                                                                                                                                 ĕ
                                                                                                                                                                                                                                                                                                                                                                                                        peptide
                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08/425,673
                                                                                                                                                                                                                                                                                                                                               Score 740; DB 6; Le
Pred. No. 7.01e-56;
1; Mismatches 6;
                                                                                                 Muccino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        07/717,151
                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                               Length 114;
                                                                                                                                                                                                                                                                                272
                                                                                                                               Specificity and Activity
                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                 228
                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                               and
δõ
                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                               XXXXXX
```

```
Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-425-673-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 11, Application US/08425673.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 11, Application US/08425673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  229 IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPR 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   67 IRLPGCPRGVNPVVSYAVALSCQCALCRRSTIDCTVRGLGPSYCDDPR 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (609) 466-2760
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 18-JUN-1991
ATTORNEY/AGENT INFORMATION:
NAME: MUCCLINO, RICHARD R.
REGISTRATION NUMBER: 32,538
REFERENCE/DOCKET NUMBER: UMD
TELECOMMUNICATION INFORMATION:
TELEPHONE: (609) 466-3407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                  APPLICANT: Moyle, William R.
APPLICANT: Moyle, Robert K.
TITLE OF INVENTION: Analogs of Glycoprotein Hormones Having
TITLE OF INVENTION: Altered Receptor Binding Specificity and
TITLE OF INVENTION: Methods For Preparing and Using Same
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
                PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/717,151
FILING DATE: 18-JUN-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: peptide HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
ATTORNEY/AGENT INFORMATION:
                                                                  APPLICATION NUMBER: FILING DATE: CLASSIFICATION: 514
                                                                                                                                                                                                                                                                      STATE:
                                                                                                                                                                                                                                                                                     STREET: P.O. Bo:
CITY: Princeton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                   COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                    ZIP: 08551
                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          h 31.4%;
Similarity 91.7%;
99; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INSE: NO
114 AA; 12401 MW; 67071 CN;
                                                                                                                                                                                                                                                                    New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               114 amino acids
                                                                                                                                                                                                                                                                                                                           Richard
                                                                                                                                                                                                                                                                                                      Box 1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                     US/08/425,673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 734; DB 6;
Pred. No. 2.47e-55;
0; Mismatches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07/717,151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.0-004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                               Activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
```

and

TELEPHONE: (609) 466-3407

REFERENCE/DOCKET NUMBER: UMD 1.0-004

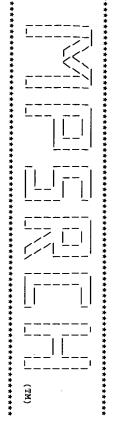
NAME: Muccino, Richard R. REGISTRATION NUMBER: 32,538

```
8888888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-425-673-8
                                                                                                                                                                                                                                                                                                                                                      Sequence 8, Application US/08425673.
                                                                                                                                                                                                                                                                                                                                                                           01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                              XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: (609) 466-2760
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 117 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                           Sequence 8, Application US/08425673 Patent No. 5508261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          229
               PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/717,151
FILING DATE: 18-JUN-1991
ATTORNEY/AGENT INFORMATION:
NAME: MUCCINO, Richard R.
REGISTRATION NUMBER: 32,538
REFERENCE/DOCKET NUMBER: UND 1.0-00
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     30.5%;
Local Similarity 98.9%;
es 93; Conservation
                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: LBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 1
                                                                                                                                                                                                                                                              APPLICANT: Moyle, William R.
APPLICANT: Campbell, Robert K.
TITLE OF INVENTION: Analogs of Glycoprotein Hormones Having
TITLE OF INVENTION: Altered Receptor Binding Specificity and Activity and
TITLE OF INVENTION: Methods For Preparing and Using Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: peptide
TELEPHONE:
                                                                                                                                                                                                     STREET: P.O. Box 1
CITY: Princeton
STATE: New Jersey
                                                                                               FILING DATE:
CLASSIFICATION:
                                                                                                                   APPLICATION NUMBER: US/08/425,673
                                                                                                                                                                                       ZIP: 08551
                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                 INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          117 AA; 12890 MW; 72412 CN;
                                                                                                                                                                                                                            E: Richard R. Muccino
P.O. Box 1267
                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ĕ
         (609)
                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
           466-3407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 714; DB 6;
Pred. No. 1.63e-53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                              0-004
                                                                                                                                                                                                                                                                                                                                                                                                                 114
                                                                                                                                                                                                                                                                                                                                                                                                                 ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
```

```
8888888888
Ş
                  망
                                    Š
                                                       ઠ
                                                                                   Query Match
Best Local :
                                                                          Matches
                                                                                                               SEQUENCE
                                    229 IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDC
                                                                   29.2%;
Local Similarity 94.7%;
hes 89; Conservation
                 67 IRLPGCPRGVNPVVSYAVALSCOCALCDSDSTDC 100
                                                                                                                                                                              INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                       MOLECULE TYPE:
HYPOTHETICAL: N
ANTI-SENSE: NO
                                                                                                                                                  LENGTH: 114 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                               114 AA; 12242 MW; 69571 CN;
                                                                                                                         ð
                                                                                                                               : peptide
                                                                        Score 684; DB 6;
Pred. No. 8.72e-51;
1; Mismatches 4
                                                                                                                                                                                       œ.
262
                                                                         4,
                                                                                           Length 114;
                                                                         Indels
                                                                         0;
                                                                         Gaps
                                                       66
```

0

time completed: Wed May ne : 13 secs. σ 08:21:12 1998



Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_nn n.a. n.a. database search, using Smith-Waterman algorithm

Run on: Wed May 6 10:28:56 1998; MasPar time 67.26 Seconds 941.976 Million cell updates/sec

Tabular output not generated

Description: Perfect Score: (1-1202) from US08804166.seq 1202 >US-08-804-166-3

N.A. Sequence: Comp: 1 CTCGAGATGGCTACAGGTAA.......CCCCGATCCTCCCACAATAA 1202 GAGCTCTACCGATGTCCATT.........GGGGCTAGGAGGGTGTTATT

Scoring table: TABLE default Gap 6

Nmatch

STD:

Dbase 0;

Query 0

Searched: 102136 seqs, 26354296 bases x 2

Post-processing: Minimum Match 0% Listing first 45 summaries

Database: n-issued

1:back1 2:51 3:52 4:53 5:54 6:55 7:56 8:57 9:PCT90 10:PCT91 11:PCT92 12:PCT93 13:PCT94 14:PCT95 15:PCT96

Statistics: Mean 8.771; Variance 4.649; scale 1.887

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result	Score	% Query Match	Length	DB.	ID	Description	5	Pred. No.
1	424	35.3	2062	7	US-08-050-	Sequence 24	4, Applicati	0.00e+00
N	424	35.3	2175	7	US-08-321-		Þ	
ω	424	35.3	6889	σ	US-08-286-	Sequence 2	, Applicatio	0.00e+00
4	424	35.3	6889	14	PCT-US95-0	Sequence 2	, Applicatio	•
տ	420	34.9	600	7	US-08-050-		7, Applicati	•
o.	381	31.7	504	7	US-08-050-	Sequence 56	•	•
7	379	31.5	501	7	US-08-050-	Sequence 1	, Applicatio	
00	370	30.8	372	7	US-08-050-	Sequence 3	, Applicatio	3.96e-267
9	302	25.1	2771	7	US-08-273-	Sequence 5	, Applicatio	
10	300	25.0	474	7	US-08-050-	Sequence 49,		3.47e-211
11	301	25.0	4283	7	US-08-343-	Sequence 3	, Applicatio	.54e-
12	301	25.0	4283	7	US-08-445-	Sequence 1	, Applicatio	.54e-
13	255	21.2	477	7	US-08-050-	Sequence 53	•	2.07e-175
14	169	14.1	462	7	US-08-050-	Sequence 51	•	.03e-
15	103	8.6	138	Ç	US-08-086-	Sequence 2,	Þ	.77e-
16	99	8.2	138	G	US-08-086-	Sequence 1	, Applicatio	5.92e-54
17	88	7.3	7218	7	US-08-232-	Sequence 14	•	9.89e-46
18	69	5.7	534	σ	US-08-187-	Sequence 3	, Applicatio	8.57e-32
19	69	5.7	654	σ	US-08-187-	Sequence 1	, Applicatio	

																	O	a							
45	44	43	42	41	40	39	38	37	3 6	35	34	<b>ω</b>	32	31	30	29	28	27	26	25	24	23	22	21	20
26	27	26	30	32	32	32	36	36	36	36	36	36	36	36	36	38	40	45	52	52	52	52	59	59	59
																	ω .ω				4.3			4.9	4.9
82	81	74	33	1006	215	196	5323	5323	5125	5125	4810	4810	4810	4810	4810	633	215	7218	2248	2248	2248	2248	597	321	321
14	14	14	7	σ	σ	<b>}-</b> 4	12	7	7	12	7	14	12	13	7	7	σ	7	7	σ	7	7	σ	σ	4
PCT-US95-1	PCT-US95-1	PCT-US95-1	US-08-050-	US-08-239-	US-08-238-	5177193-2	PCT-US93-0	US-08-453-	US-08-453-	PCT-US93-0	US-08-188-	PCT-US95-0	PCT-US93-0	PCT-US94-0	US-08-453-	US-08-388-	US-08-238-	US-08-232-	US-08-475-	US-08-369-	US-08-780-	-80-	US-08-187-	US-08-314-	US-07-920-
97,	92,	94,	14,	۲,	Sequence 5, Applicatio	5	9	Sequence 9, Applicatio	11,	Sequence 11, Applicati	ω	ω	Sequence 7, Applicatio	ω	7,	Sequence 1, Applicatio	Sequence 5, Applicatio	14,	μ,		٢	1, Appl	Sequence 2, Applicatio	23, Appli	Sequence 23, Applicati
L 4.79e-03	1.29e-03	4.79e-03	2.21e	1.36e	1.36e	1.36e-06	4.31e	4.31e	4.31e	4.31e	4.31e	4.31e	4.31e		4.31e	N		5	9.36e	9.36e-20	9.36e	9	1.20e-	.20e-	1.20e-24

## ALIGNMENTS

RESULT US-08-050-319B-24 STANDARD; DNA; UNC; 2062 BP

XXXXXX

01-JAN-1900

Sequence 24, Application US/08050319B

Sequence 24, Application US/08050319B Patent No. 5633145

GENERAL INFORMATION: APPLICANT: M.Feldmann, P.W. Gray, M.J.C. Turner, F.M Brennan

APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor NUMBER OF SEQUENCES:

ADDRESSEE: Reed & RC STREET: 635 Bryant Street Reed & Robbins

STATE: Palo Alto California

94301 USA

COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS version #1.25

SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/050,31 US/08/050,319B

NAME: RObbins, Roberta L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 51:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999 FILING DATE: 10-May-1993 CLASSIFICATION: 435 ATTORNEY/AGENT INFORMATION: NAME: ROBBINS, ROBERTA L 5150-0030

TELEFAX: (415) 327-3231 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:

```
RESULT
ID US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                នននិននិនិន
                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                             ઠ
                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                   Sequence 1,
Patent No.
GENERAL IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: CDS
LOCATION: 155..1519
Sequence 2062 BP; 429 A; 617 C;
                                                                                                                                                                                                                      US-08-321-668-1 STANDARD; DNA;
                                                                                                                                                       Sequence 1, Application US/08321668
                                                                                                                                                                          01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              695
                                                                                                                                                                                                                                                                                                                                                                        585
                                                                                                                                                                                                                                                                                                                                                                                                                                               465
                                                                                                                                                                                                                                                                                                                                                                                                                                                       395 TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACACTGCCTC
                                                                                                                                                                                                                                                           765
                                                                                                                                                                                                                                                                                                705
                                                                                                                                                                                                                                                                                                                                    645
                                                                                                                                                                                                                                                                                                                                                                                         515
                                                                                                                                                                                                                                                                                                                                                                                                           525
                                                                                                                                                                                                                                                                                                                                                                                                                             455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                         APPLICANT: WALLACH, David
APPLICANT: WAREBUSCH, Cord
APPLICANT: VARFOLOMEEV, Eugene
APPLICANT: VARFOLOMEEV, Eugene
APPLICANT: BATKIN, Michael
TITLE OF INVENTION: MOLECULES INFLUENCING THE SHEDDING OF
TITLE OF INVENTION: THE THE RECEPTORS, THEIR PREPARATION AND THEIR
NUMBER OF SEQUENCES: 42
             NUMBER OF SEQUENCE.
CORRESPONDENCE ADDRESS:
COVERSSEE: BROWDY AND NEIMARK
COVERTH Street, N.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: cDNA to mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                 TCCTGT
                                                                                                                                                                                                                                                                                              CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                    AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                            TCCTGT 700
                                                                                                                                                                                                                                                                                                                                                                      CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                         AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tch 35.3%; al Similarity 99.8%; 425; Conservative
                                                                                                                   INFORMATION:
                                                                                                                                     ۲,
                                                                                                                            , Application US/08321668 5665859
        0.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2062 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 424; DB 7; 1
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                                                       UNC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              573 G; 443 T;
                                                                                                                                                                                                                       2175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 7; Length 2062;
                         Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0 other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                               694
                                                                                                                                                                                                                                                                                                                                 704
                                                                                                                                                                                                                                                                                                                                                   634
                                                                                                                                                                                                                                                                                                                                                                     644
                                                                                                                                                                                                                                                                                                                                                                                       574
                                                                                                                                                                                                                                                                                                                                                                                                        584
                                                                                                                                                                                                                                                                                                                                                                                                                           514
                                                                                                                                                                                                                                                                                                                                                                                                                                             524
                                                                                                                                                                                                                                                                                                                                                                                                                                                              454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                            USE
```

```
δÃ
                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                    ş
Ş
                        밁
                                               Ş
                                                                        밁
                                                                                               Ş
                                                                                                                           밁
                                                                                                                                                 Ş
                                                                                                                                                                           용
                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                 ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 35.3%;
Best Local Similarity 99.8%;
Matches 425; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 202-737-3528
TELEX: 248633
INPORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENCTH: 2175 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: CDS
LOCATION: 256..1620
Sequence 2175 BP; 474 A;
796 TCCTGT
                                                                                                                                                                 616 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                      705
                                                                                                    645
                                                                                                              676 TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                     525
                                                                                                                                                                                                                 556 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                   496 TGCAGGGAGTGTGAGAGCGGCTCCTTCACACCGCTTCAGAAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                    436 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                465 TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                      405 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPOTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: WA
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-628-5197
TELEPAX: 202-737-3528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: IL 10
FILING DATE: 12-OCT-1993
ATTORNEY/AGENT INFORMATION:
NAME: BROWDY, Roger L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 20004

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
COMPUTER: IBM PC com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                 TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                    CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                    AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: BROWDY, ROGER L. REGISTRATION NUMBER: 25,618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/08/321,668
FILING DATE: 12-OCT-1994
                        801
                                                                                                                                                                                                                                                                                                                                                                                                                                                         641 C; 604 G; 456 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IL 107268
                                                                                                                                                                                                                                                                                                                                                                                                       Score 424; DB 7;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WALLACH-13
                                                                                                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 2175;
                                                                                                                                                                                                                                                                                                                                                                                                         Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                        795
                                                                                                                                                  644
                                                                                                                                                                             675
                                                                                                                                                                                                    584
                                                                                                                                                                                                                             615
                                                                                                                                                                                                                                                     524
                                                                                                                                                                                                                                                                              555
                                                                                                                                                                                                                                                                                                      464
                                                                                                                                                                                                                                                                                                                               495
                                                                                                                                                                                                                                                                                                                                                        6
                                                                                                                                                                                                                                                                                                                                                                                435
                                                                                                704
                                                                                                                           735
```

RESULT 3 ID US-08-286-740-2 STANDARD;

DNA;

UNC;

XXXXXX

```
Ş
                                      Ş
                                                               뮍
                                                                                Ş
                                                                                                       밁
                                                                                                                            Ş
                                                                                                                                                                      ą
                     밁
                                                                                                                                                   밁
                                                                                                                                                                                           밁
                                                                                                                                                                                                                Query Match
Best Local S
Matches 42
                                                                                                       1845
                                                                                                                                                 1785
                     1965
                                                               1905
                                                                                                                                                                    TOPOLOGY: linear
Sequence 6889 BP; 1729 A; 1826 C; 1681 G; 1653 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 2, Application Patent No. 5561053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2, Application US/08286740
                                                                                                                             405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION: APPLICANT: Crowle
585
                                                                                    465
                                                                                                                                                                                                                                                                                                 TELEFAX: 415/952-9881
TELEY: 910/371-7168
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 6889 bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
STREET: 460 Point San Bruno B:
CITY: South San Francisco
STATE: California
COUNTRY: USA
                                                                                                                                                                                                               Match 35.3%;
Local Similarity 99.8%;
les 425; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08
FILING DATE: 05-AUG-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch, 360 Kb f
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION: TELEPHONE: 415/225-1994
                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION:
                                                                                                                                                                                                                                                                  TYPE: nucleic acid STRANDEDNESS: double TOPOLOGY: linear
                                                                                                                          AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 1844
           CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT 2024
                                        TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                    TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER: REFERENCE/DOCKET NUMBER:
CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAAACCTT
                                                                                  TGCAGGGAGTGTGAGAGCGGCTCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94080
                                                                                                                                                                                                                                                                                                                                                                                                   Lee, Wendy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Crowley,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craig W. METHOD FOR SELECTING HIGH-EXPRESSING HOST CELLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/08286740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/08/286,740
                                                                                                                                                                                                               Score 424; DB 6;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                          2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              360 Kb floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Blvd
                                                                                                                                                                                                                                   Length 6889;
                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                0;
                                                                                                                                                                                                               Gaps
                                                             1964
                                                                                  524
                                                                                                       1904
644
                                          584
                                                                                                                                                                                                                0
```

```
δÃ
                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
                                                                Query Match
Best Local S
Matches 42
                    2145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1785 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 1844
                                                                                                          TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
Sequence 6889 BP; 1729 A; 1826 C; 1681 G; 1653 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2, Application PC/TUS9509576
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCT-US95-09576-2 STANDARD; DNA; UNC; 6889 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 2, Application PC/TUS9509576
                                                                                                                                                    INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 6889 bases
                                                                                                                                                                                    REGISTRATION NUMBER: 00,000
REFERENCE/DOCKET NUMBER: 798P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-1994
TELEFAX: 415/952-9881
TELEX: 910/371-7168
                                                                                                                                                                                                                                                   CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/286
FILING DATE: 05-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Lee, Wendy M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     705
                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-SOFTWARE: patin (Genentech) CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: GENENTECH, INC.
TITLE OF INVENTION: METHOD FOR SELECTING HIGH-EXPRESSING
TITLE OF INVENTION: HOST CELLS
                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM: MEDIUM TYPE: 5.25 inch,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                          LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: Genentech, Inc.
STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ANACAGAACACCGTGTGCACCTGCCATGCAGGTTTCTTTCTAAGAGAAAAACGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTGT 770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTGT 2150
                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                               ch 35.3%;
l Similarity 99.8%;
425; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                               94080
                                                                                                                                                                                                                                                                                                                                                                                                                                   California
                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                   PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                        08/286740
                                                                                                                                                                                                                                                                                                                                   PCT/US95/09576
                                                               Score 424; DB 14;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                       360 Kb floppy
                                                                                                                                                                                                                                   798PCT
                                                                                      DB 14; Length 6889;
                                                                 ۲.
                                                                 Indels
                                                                 0,
                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  704
                                                                 0
```

```
RESULT
ID U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                        Sequence 47, Application US/08050319B
Patent No. 5633145
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Recepton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1845
                                                                                                                                                                                                                                                                                                                                                                           Sequence 47, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                    XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-050-319B-47 STANDARD; DNA; UNC; 600 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   465
                    TELEFAX: (415) 327-323
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   705
                                      NAME: ROBbins, Roberta L.
REGISTRATION NUMBER: 33,208
REGISTRATION NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEFAX: (415) 327-3231
                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                     APPLICATION NUMBER: US/08/050,319B
FILING DATE: 10 May-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                             SOFTWARE: Patentin Release #1.0, version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTGT 2150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCAGGGAGTGTGAGAGCGGCTCCTTCACCCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCTGT 770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC 1964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                            94301
                                                                                                                                                                                                                                                  635 Bryant Street
           600 base pairs
                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                               Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         464
                                                                                                                                                                                                                                                                      RESULT
  Š
                                                                                                                                                                                                                                                                                                                                                                        몽
                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       នននននន
                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                Sequence 56, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                     US-08-050-319B-56 STANDARD; DNA; UNC; 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCATION: 1..597
Sequence 600 BP; 148 A; 157
                                                                                                                                                                                               Sequence 56, Application US/08050319B
                                                                                                                                                                                                                    01-JAN-1900
                                                                                                             GENERAL INFORMATION:
APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.JC. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Recepto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                 541 TCCTGT 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            y Match 34.9%;
Local Similarity 99.3%;
hes 423; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: c
FEATURE: CDS
NAME/KEY: CDS
LOCATION: 1..5
         ZIP: 94301
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                NUMBER OF SEQUENCES: CORRESPONDENCE ADDRESS: Reed & RO
                                                                                                                                                                                                                                                                                 σ
                                                  CITY: Palo Alto
STATE: California
                                      COUNTRY:
                                                                      STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
 COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS:
                                                                     635 Bryant Street
                                        USA
E: Floppy disk
IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA
```

BP

Receptor

```
121 GATAGTGTGTGCCCACAGGAAAATATATCCACCCTCAAAATAATTAGTTGCATTTGCTGTACC
                                                                                      421 TTCCAGTGCTTCAATTGCAGCCTCTGCCTCCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                               465 TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                             345 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
361 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                     TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAAACCACCTCAGACACTGCCTC
                AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                        CGGGACACCGTGTGCGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                    TICCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 420; DB 7;
Pred. No. 0.00e+00;
0; Mismatches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C; 162 G; 133 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                   540
                                                                                                     480
                                                                                                                                        644
                                                                                                                                                                           420
                                                                                                                                                                                                              584
                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                   524
                                                                                                                                                                                                                                                                                                                                                       464
                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                             404
 764
                                                                  704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               888888888888888888888888888888888888
                                                                                                                                                                             RESULT
ID US
                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                      ş
                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                          å
                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Robbins, Roberta L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEPHAX: (415) 327-3331
INFORMATION FOR SEQ ID NO: 56:
SEQUENCE CHARACTERISTICS:
LENGTH: 514 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: CDS
LOCATION: 1..501
Sequence 504 BP; 122 A; 137 C; 138 G; 107 T; 0 other;
Sequence 1, Application US/08050319B
Patent NO. 5633145
GENERAL INFORMATION:
APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Bro
                                                                                                                                                                              US-08-050-319B-1
                                                                                Sequence 1, Application US/08050319B
                                                                                                           01-JAN-1900
                                                                                                                                      XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 GATAGTGTGTGCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                       465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 240
                                                                                                                                                                                                                                    705
                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  345 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match 31.7%;
Local Similarity 99.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/01
FILING DATE: 10-May-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Robbins, Roberta L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCAGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 300
                                                                                                                                                                                                                                                                                                     TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG 480
                                                                                                                                                                                                                                                                                                                                                          CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                 AAACAGAACACCGTGTGCACCTG
                                                                                                                                                                                                                                                         AAACAGAACACCGTGTGCACCTG 503
                                                                                                                                                                                                                                                                                      TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                             CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS:
TOPOLOGY: 11r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PatentIn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cDNA to mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Release #1.0, version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/08/050,319B
                                                                                                                                                                           DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 381; DB 7; L
Pred. No. 6.06e-276;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 504;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                           644
                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                 584
                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                       524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            464
```

```
Š
                                                                       밁
                                                                                              Ş
                                                                                                                   . 문
                                                                                                                                                 Š
                                                                                                                                                                           밁
                                                                                                                                                                                                   Š
                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                      20
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (415) 617-8999
TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 501 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                             LOCATION: 1..501
Sequence 501 BP; 121 A; 137 C; 137 G; 106 T; 0 other;
                                                                                                                                                                                                                                                                                                                       121 GATAGTGTGTGCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 180
                                               645
                                                                                                                                                   525
                                                                                                                                                                                                                                                         405
                                                                                                                                                                                                                                                                   181 AAGTGCCACAAAGGAACCTTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                          345
                         481 AAACAGAACACCGTGTGCACC
                                                                                                                          361
                                                                                                                                                                             301
                                                                                                                                                                                                                  241 TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: ROBBINS, ROBERTE L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/08/050,319B FILING DATE: 10-May-1993 CLASSIFICATION: 435 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: DNA (genomic) FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                             CGGGACACCGTGTGTGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                         GATAGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
AAACAGAACACCGTGTGCACC
                                                                                                 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                   AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                             AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                      TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACCTGCCTC
                                                                                                                                                                                                                                                       AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: CDS
LOCATION: 1..!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                           380;
                                                                                                                                                                                                                                                                                                                                                          h 31.5%;
Similarity 99.7%;
380; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Reed &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Modified human TNFalpha (Tumor Necrosis Factor alpha) Receptor 57
                       501
                                                                                                                                                                                                                                                                                                                                                          Score 379; DB 7; L
Pred. No. 2.43e-274;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                             1; Indels
                                                                                                                                                                                                                                                                                                                                                                                   Length 501
                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                       480
                                                                                                                                                                                                                                                                               240
                                                                                                                         420
                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                         404
                                                                                                 644
                                                                                                                                                   584
                                                                                                                                                                             360
                                                                                                                                                                                                      524
                                                                                                                                                                                                                                                       464
                                               704
```

Ü

US-08-050-319B-3

STANDARD; DNA; UNC;

Š

XXXXXX

```
맑
                                                                                    Š
                                                                                                              밁
                                                                                                                                     Ş
                                                                                                                                                               밁
                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                          뮻
                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                     NAME/KEY: CDS
LOCATION: 1..372
Sequence 372 BP; 98 A; 102 C; 95 G; 77 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 3, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 3, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (415) 327-3231 INFORMATION FOR SEQ ID NO: 3: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
               241
                                                               181
                                                                                        471
                                                                                                 121 GAGTGTGAGAGCGGCTCCATCACCGCTTCAGAAAACCACCTCAGACACTGCCTCAGCTGC
                                                                                                                                         411
                                                                                                                                                                                         351
                                                                                                                                                   61 CACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGACTGCAGG 120
                                                                                                                                                                                                    1 GTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACCAAGTGC 60
                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 51:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: Robbins, Roberta L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE:
                                                 TCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGACCGGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
FILING DATE: 10-May
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version #1.25
            ACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTTTTCCAG
                                    TCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGACCGGGAC
                                                                                     GAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTCAGCTGC
                                                                                                                                      CACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGACTGCAGG
                                                                                                                                                                                      GTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACCAAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
LENGTH:
                                                                                                                                                                                                                                       371;
                                                                                                                                                                                                                                                   30.8%;
Similarity 99.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94301
                                                                                                                                                                                                                                                                                                                                                                            nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Robbins, Roberta L.
                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E: Reed & Robbins
635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                         372 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-May-1993
                                                                                                                                                                                                                                                                                                                                         DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                 double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/08/050,319B
                                                                                                                                                                                                                                      Score 370; DB 7; L
Pred. No. 3.96e-267;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5150-0030
                                                                                                                                                                                                                                       1; Indels
                                                                                                                                                                                                                                                               Length 372;
                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                        410
                                                           240
                                                                                                            180
                                                                                                                                     470
                                                                                     530
                                                                                                                                                                                                                                         0
```

```
RESULT
ID U
 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-273-411-5 STANDARD; DNA; UNC; 2771 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 5, Application US/08273411 Patent No. 5625124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 5, Application US/08273411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Falk, Per
APPLICANT: Gordon, Jeffrey I.
TITLE OF INVENTION: Animal Model for Gastro-Intestinal
TITLE OF INVENTION: Disease
                                                                                                                                                                                           TELEPHONE: (404) 815-6508
TELEFAX: (404) 815-6555
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 2771 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361 AACACCGTGTGC 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     711 AACACCGTGTGC 722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        591 ACCGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAAACCTTTTCCAG
                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-POS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                            RELEVANT RESIDUES IN SEQ ID PUBLICATION INFORMATION: Seeburg, et al.
                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: WI
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: Pabst, Patrea L.
REGISTRATION NUMBER: 31,
                                                                                                                  PUBLICATION INFORMATION:
                                                                                                                               ANTI-SENSE:
                                                                                                                                       MOLECULE TYPE:
HYPOTHETICAL: |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Atlanta
STATE: Georgia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAGAAACAG 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAGAAACAG 360
                                                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                  TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                        CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: USA
ZIP: 30309-4530
                                                                                                         AUTHORS:
                                                                                                                                                                TOPOLOGY:
                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                    JOURNAL:
                                                                1988
                                                                                                                                                                                                                                                                                                                                                                                                                             Georgia
239-249
                                                                         1318-1332
                                                                                                                                                                                                                                                                                                                                                                                                                                                  E: Patrea L. Pabst
1100 Peachtree Str
                                                                                                         Sweetser, et al
                    DNA
                                                                                             Genes & Dev.
                                                                                                                                ĕ
                                                                                                                                                              linear
                                                                                                                                           ŏ
                                                                                                                                                    DNA (genomic)
                                                                                                                                                                        double
                                                                                                                                                                                                                                                                                                                             US/08/273,411
                                                                                                                                                                                                                                                                      31,284
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Street, Suite 2800
                                                     NO:
                                                    <u>ن</u>
                                                    FROM 561 TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         650
```

```
γQ
                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                    δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
  Ş
                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               88888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                    Patent No. 5633145
GENERAL INFORMATION:
                                                                                                                                                                                                                Sequence 49, Application US/08050319B Patent No. 5633145
                                                                                                                                                                                                                                            Sequence 49, Application US/08050319B
                                                                                                                                                                                                                                                                                      XXXXXX
                                                                                                                                                                                                                                                                                                                  US-08-050-319B-49 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RELEVANT RESIDUES IN SEQ ID NO: 5 Sequence 2771 BP; 666 A; 718 C; 704 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                          187
                                                                                                                                                                                                                                                                                                                                                                                                                                                             856
                                                                                                                                                                                                                                                                                                                                                                                976
                                                                                                                                                                                                                                                                                                                                                                                                  247
                                                                                                                                                                                                                                                                                                                                                                                                                      916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         680 ATGGCTACAGGTAAGCGCCCCTAAAATCCCTTTTGGGCACAATGTGTCCTGAGGGGAGAGG
                                                                                                                                                                                                                                                                                                                                                            307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 740 CAGCGACCTGTAGATGGGACGGGGGCACTAACCCTCAGGTTTGGGGCTTCTGAATG--AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PUBLICATION INFORMATION:
AUTHORS: Sweetser, et al
JOURNAL: J. Biol. Chem.
VOLUME: 261
PAGES: 5533-5561
DATE: 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, version
CURRENT APPLICATION DATA:
                                                                                                                                                  APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7
                                                                                                                                         NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                              10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATCGCCATGTAAGCCCAGTAT--GGCCAATCTCAGAAAGCTCCTGGTCCCTGGAGGGAT 855
                                                                                                 STREET: 635 Bryant
CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                                         TAGCGACCTGTAGATGGGACGGGGCACTAACCCTGAGGTTTGGGGCTTCTGAATGTGAG
                                                                                                                                                                                                                                                                                                                                                                                              TCCCTCTGTTGCCCTGTGGTTTCTCCCCAGGCTCCCGGACGTCCCTGCTCCTGGCTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGAGAAAAAACAAACAGCTCCTGGAGCAGGGAGAGTGCTGGCCTCTTGCTCTCCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAGAGAGAAAAACAAACAGCTCCTGGAGCAGGAGAGTGCTGGCCTCTTTGCTCTCCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATCGCCATGTAAGCCCAGTATTTGGCCAATGTCAGAAAGCTCCTGGTCCCTGGAGGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGGCTACAGGTAAGCGCCCCTAAAATCCCTTTGGGCACAATGTGTCCTGAGGGGAGAGG
APPLICATION NUMBER: US/08/050,319B FILING DATE: 10-May-1993
                                                                                COUNTRY: UZIP: 94301
                                                                                                                                                                                                                                                                                                                                                                                                                   TCCCTCTGTTGCCCTCTGGTTTCTCCCCCAGGCTCCCGGACGTCCCTGCCTCCTGGCTTTTG
                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      h 25.1%; Score 302; DB 7; L
Similarity 97.6%; Pred. No. 8.84e-213;
330; Conservative 0; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1982
                                                                                                                       635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESIDUES IN SEQ
                                                                                         USA
                                                                                                                                 Reed & Robbins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         et al.
                                                                                                                                                                                                                                                                                                                  DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NO:
                                                                                                                                                                                                                                                                                                                  UNC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5: FROM 1 TO 617; 683 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>ა</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              620 TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 2771;
                               #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             186
                                                                                                                                                                                                                                                                                                                                                                                                                   975
                                                                                                                                                                                                                                                                                                                                                                                                                                                          915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              66
                                                                                                                                                                                                                                                                                                                                                                                                                                       246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                       RESULT
Š
                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                            ΩV
                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                     Sequence 3, Application US/08343401A Patent No. 5661132
                                                                                                                                                                                                                       US-08-343-401A-3 STANDARD;
                                                                                                       Patent No. 5661132
GENERAL INFORMATION:
                                                                                                                                                 Sequence 3, Application US/08343401A
                                                                                                                                                                     01-JAN-1900
                                                                                                                                                                                          XXXXXX
                                                                                                                                                                                                                                                               755
                                                                                                                                                                                                                                                                                   405
                                                                                                                                                                                                                                                                                                        695
                                                                                                                                                                                                                                                                                                                           345
                                                                                                                                                                                                                                                                                                                                               635
                                                                                                                                                                                                                                                                                                                                                                 285
                                                                                                                                                                                                                                                                                                                                                                                      575
                                                                                                                                                                                                                                                                                                                                                                                                                             515
                                                                                                                                                                                                                                                                                                                                                                                                                                                165
                                             APPLICANT: Andree, Christophe TITLE OF INVENTION: Improved with the control of SEQUENCES: 4
                                                                  APPLICANT: Swain, William F
APPLICANT: Macklin, Michael D
APPLICANT: Eriksson, Elof
APPLICANT: Andree, Christophe
                                    CORRESPONDENCE ADDRESS:
         CITY:
                 STREET:
                            ADDRESSEE:
```

Madison WI

PO Box 2113

Quarles & Brady

Wound

DNA; UNC; 4283

```
LOCATION: 1..471
Sequence 474 BP; 110 A; 126 C; 132 G; 106 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (415) 327-3231 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                             455 GGATACGGACTGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAG
                                                                                                                                                                                                                                                                                                                             105 GGACAGGGAGAAGAGAGAGTGTGAGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAG
                                                                                                                                                                                                                    225 CACAGTGGACCGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Robbins, Roberta L.
REGISTRATION UMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 617-8999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: cDNA to mRNA
                                                                                                                      TGAAAACCTTTTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTC
                CGAGTGTGTCTCCTGT 420
                                                                               ACACTGCCTCAGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS: dou
TOPOLOGY: linear
CGAGTGTGTCTCCTGT
                                                             ACACTGCCTCAGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                            308;
                                                                                                                                                                                                                                                                                                                                                                                        h 25.0%;
Similarity 97.5%;
                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     double
770
                                                                                                                                                                                                                                                                                                                                                                           Score 300; DB 7; L
Pred. No. 3.47e-211;
0; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49:
                                                                                                                                                                                                                                                                                                                                                                                                      Length 474;
                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                             754
                                                                                          404
                                                                                                                                                     344
                                                                                                                                                                                                                                                                              224
                                                                                                                                                                                                                                                                                                                                            164
                                                                                                                         694
                                                                                                                                                                                     634
                                                                                                                                                                                                                  284
                                                                                                                                                                                                                                                 574
                                                                                                                                                                                                                                                                                                             514
```

```
RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                            ş
                                                                               밁
                                                                                                      Ş
                                                                                                                                   В
                                                                                                                                                        Ş
                                                                                                                                                                                    밁
                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                       Query Match 25.0%;
Best Local Similarity 95.3%;
Matches 322; Conservative
US-08-445-265A-1 STANDARD; DNA; UNC; 4283 BP
                                                                 1012 GCCTGCTCTGCCTGCCCTGGCTTCAAGAGGGCAGTGCC 1049
                                                                                                                                                                                                                                                                                                                                                                                                                        LOCATION: 713...1049
Sequence 4283 BP; 1023 A; 1095 C; 1114 G; 1051 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/343,401A
FILING DATE: 22-NOV-1994
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Seay, Nicholas J
REGISTRATION NUMBER: 27,386
REGISTRATION NUMBER: 27,386
                                                                                                                                                                                                                                                                                                                                  713 ATGGCTACAGGTAAGCGCCCCTAAAATCCCCTTTGG-CACAATGTGTCCTGAGGGGAGAGGG
                                                      307
                                                                                                         247
                                                                                                                                   952
                                                                                                                                                            187
                                                                                                                                                                                                                127
                                                                                                                                                                                                                                                                              772 CAGCGACCTGTAGATGGGACGGGGGCACTAACCCTCAGGGTTTGGGGTTCTGAATGTGAG 831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 608-251-9166
INFORMATION FOR SEQ ID NO: 3:
                                                                                                                                                                                                                                                                67 TAGCGACCTGTAGATGGGACGGGGCACTAACCCTGAGGTTTGGGGCTTCTGAATGTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION:
FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                       7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 4283 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: circ
MOLECULE TYPE: I
IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 11-229-9103-9
TELECOMMUNICATION INFORMATION:
TELEPHONE: 608-251-5000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                       TCCCTCTGTTGCCCTCTGGTTTCTCCCCAGGCTCCCGGACGTCCCTGCTCCTGGCTTTTG 101:
                                                    GCCTGCTCTGCCTGGCTTCAAGAGGGCAGTGCC 344
                                                                                                        TCCCTCTGTTGCCCTGTGGTTTCTCCCCCAGGCTCCCGGACGTCCCTGCTCCTGGCTTTTG
                                                                                                                                                          GGAGAGAGAAAAACAACAGCTCCTGGAGCAGGGAGAGTGCTGGCCTCTTGCTCCCGGC
                                                                                                                                                                                    GGAGAGAAAAAACAAACAGCTCCTGGAGCAGGGAGAGTGTTGGCCTCTTGCTCTCCGGC
                                                                                                                                                                                                             TATCGCCATGTAAGCCCAGTATTTGGCCAATGTCAGAAAGCTCCTGGTCCCTGGAGGGAT
                                                                                                                                                                                                                                      TATCGCCATCTAAGCCCAGTATTTGGCCAATCTCAGAAAGCTCCTGGCTCCCTGGAGGAT 891
                                                                                                                                                                                                                                                                                                                   ATGGCTACAGGTAAGCGCCCCTAAAATCCCCTTTGGGCACAATGTGTCCTGAGGGGAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLONE: pwRG1630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    53701-2113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    exon
981..1253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          exon
713..721
                                                                                                                                                                                                                                                                                                                                                                                                                                       sig_peptide
713..1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      circular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            join(713..721,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                     Score 301; DB 7; Length 4283; Pred. No. 5.54e-212; 0; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            981..1253)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #1.30
                                                                                                                                                                                                                                                                                                                                                                       1:
                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                              771
                                                                                                                                                          246
                                                                                                                                                                                   951
                                                                                                                                                                                                             186
                                                                                                                                                                                                                                                                126
                                                                                                                                                                                                                                                                                                                    66
                                                                                                                                                                                                                                                                                                                                                                       ۲,
```

```
Š
                                                                         밁
                                                                                                                         밁
                                                                                                                                                 Š
                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                       Š
                       용
                                                                                                δõ
                                                                                                                                                                                                   8
                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 608-251-9100 INFORMATION FOR SEQ ID NO: 1: SEQUENCE CHARACTERISTICS: LENGTH: 4283 base pairs TYPE: nucleic acid STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                    LOCATION: join(713...721, 981...1250)
Sequence 4283 BP; 1023 A; 1095 C; 1114 G; 1051 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOTTWARE: PATENTIA Release #1.0, v
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/445,265A
FILING DATE:
CLASSIFICATION: 604
ATTORNEY/AGENT INFORMATION:
NAME: Seay, Nicholas J
REFERENCE/DOKKET NUMBER: 110229.91
TELECOMMUNICATION INFORMATION:
TELEPHONE: 608-251-5000
TELEPHONE: 608-251-5000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/08445265A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1, Application US/08445265A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION: APPLICANT: Erikss
                                                                                                   127
                                                                                                             832 TATCGCCATCTAAGCCCCAGTATTTGGCCAATCTCAGAAAGCTCCTGGCTCCCTGGAGGAT
                                                                                                                                                               772 CAGCGACCTGTAGATGGGACGGGGGCACTAACCCTCAGGGTTTGGGGTTCTGAATGTGAG
                                                                                                                                                                                                                713 ATGCTACAGGTAAGCGCCCCTAAAATCCCTTTGG-CACAATGTGTCCTGAGGGGAGAGGG
 247
                                                 187
                                                                                                                                                   67 TAGCGACCTGTAGATGGGACGGGGGCACTAACCCTGAGGTTTGGGGGCTTCTGAATGTGAG
                                                                                                                                                                                                                                                   7 Match 25.0%;
Local Similarity 95.3%;
les 322; Conservative
                                                                                                                                                                                                    7
                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: circular MOLECULE TYPE: other nucleic acid DESCRIPTION: /desc = "Plasmid DNA"
                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION:
          TCCCTCTGTTGCCCCTCTGGTTTCTCCCCAGGCTCCCGGACGTCCCTGCTCCTGGCTTTTG
 TCCCTCTGTTGCCCTGTGGTTTCTCCCCCAGGCTCCCGGACGTCCCTGCTCCTGGCTTTTG
                                                GGAGAGAGAAAAACAACAGCTCCTGGAGCAGGGAGAGTGTTGGCCTCTTGCTCTCCGGC
                                                                                               TATCGCCATGTAAGCCCAGTATTTGGCCAATGTCAGAAAGCTCCTGGTCCCTGGAGGGAT
                                                                                                                                                                                                    ATGGCTACAGGTAAGCGCCCCTAAAATCCCTTTGGGCACAATGTGTCCTGAGGGGGAGAGG
                                                                                                                                                                                                                                                                                                                   NAME/KEY: CDS
LOCATION: joir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 53703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Madison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 South Pinckney Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eriksson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Quarles & Brady
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENE DELIVERY BY MICRONEEDLE INJECTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Elof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/08/445, 265A
                                                                                                                                                                                                                                                  Score 301; DB 7; L
Pred. No. 5.54e-212;
0; Mismatches 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             110229.91080
                                                                                                                                                                                                                                                                            Length 4283;
                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                   1;
                                                                                                                                                                                                                                                    Gaps
                        1011
                                                                                                                         891
                                                246
                                                                         951
                                                                                                  186
                                                                                                                                                   126
                                                                                                                                                                           831
                                                                                                                                                                                                    66
                                                                                                                                                                                                                           771
                                                                                                                                                                                                                                                    ļ:
```

```
Ş
                                                                     밁
                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
  Ş
                        밁
                                                                                                                  밁
                                                                                                                                         Best Loc
Matches
                                                                                                                                                                Query Match
                                                                                                                                                                                   Sequence 477 BP; 117 A; 122 C; 131 G; 107 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 53,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 53, Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-050-319B-53 STANDARD; DNA; UNC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1012 GCCTGCTCTGCCTGCCTGGCTTCAAGAGGGCAGTGCC 1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No. 5633145
GENERAL INFORMATION:
                                                                                                        121 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 180
                                                                                                                                                                                                                                                                              TELEPHONE: (415) 617-8999
TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 53
SEQUENCE CHARACTERISTICS:
LENGTH: 477 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 307
   465
                        241
                                               405
                                                                      181
                                                                                            345
                                                                                                                                        / Match 21.2%;
Local Similarity 98.9%;
nes 258; Conservative
                                                                                                                                                                                                 FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Patentin Release #1.0, version #1.25 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/050,319B FILING DATE: 10-May-1993 CLASSIFICATION: 435 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 5150-0030
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: Modified human INFalpha (Tumor TITLE OF INVENTION: Necrosis Factor alpha) Recepton NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: M.Feldmann, P.W. Gray, APPLICANT: M.J.C. Turner, F.M Bre
                                                                                                                                                                                                                                     MOLECULE TYPE: cDNA to mRNA
                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: Robbins, Roberta L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                           GATAGTGTGTCCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 404
                                                                                                                                                                                                                                                               TYPE: nucleic acid STRANDEDNESS: doub
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCTGCTCTGCCTGCCTTCAAGAGGGCAGTGCC
                                              AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                         STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5633145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E: Reed & Robbins
635 Bryant Street
                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                    .474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Floppy disk
                                                                                                                                                                                                                                                           double
                                                                                                                                    Score 255; DB 7; Len;
Pred. No. 2.07e-175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F.M Brennan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               344
                                                                                                                                                            Length 477
                                                                                                                                      Indels
                                                                                                                                        0
                                                                                                                                        Gaps
                     300
                                            464
                                                                                                                                        0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QУ
               밁
                                       δã
                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
ID US-08-050-319B-51 STANDARD; DNA; UNC; 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                            Matches
                                                                                                                     Query Match
                                                                                                                                                                                                                                                         TELEPAX: (415) 617-899
TELEFAX: (415) 617-899
TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 51:
SEQUENCE CHARACTERISTICS:
LENGTH ACT INTO NUMBER: 33,208
TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 51:
SEQUENCE CHARACTERISTICS:
LENGTH ACT INTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 51, Application US/08050319B Patent No. 5633145 GENERAL INFORMATION:
                                                                                                                                            LOCATION: 1..459
Sequence 462 BP; 116 A; 119 C; 121 G; 106 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 51,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         XXXXXX
                                         602
300 CAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAGAAACAGAGACACCGTGTG 359
                                                     240 CTGCAGGAAGAACCAGTACCGGCATTATTGGAAGTGAAAAACCTTTTCCAGTGCTTCAATTG 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361 CGGGACACCGTGTGTACCTGC 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                         / Match 14.1%;
Local Similarity 100.0%;
les 169; Conservative
                                                                                                                                                          FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Patentin Release #1.0, version #1.25
CURRENT APPLICATION DATA:
APPLICATION UNDER: US/08/050,319B
FILING DATE: 10-May-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Robbins, Roberta L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: M.Feldmann, P.W. Gray,
APPLICANT: M.J.C. Turner, F.M Brennan
TITLE OF INVENTION: Modified human TNFalpha (Tumor
TITLE OF INVENTION: Necrosis Factor alpha) Receptor
                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                               STRANDEDNESS:
TOPOLOGY: lir
                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGACACCGTGTGTGGCTGC 605
                                        CTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTTTTTCCAGTGCTTCAATTG
                                                                                                                                                                                                                                       TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                    NAME: Robbins, Roberta L. REGISTRATION NUMBER: 33,2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/08050319B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E: Reed & Robbins
635 Bryant Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                 linear
                                                                                                                                                                          CDS
                                                                                                                                                                                                    cDNA to mRNA
                                                                                                                                                                                                                               double
                                                                                         Score 169; DB 7; I
Pred. No. 1.03e-107;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                         5150-0030
                                                                                            0
                                                                                                                     Length 462;
                                                                                            Indels
                                                                                            0
                                                                                          Gaps
                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                            0
```

Ş 밁 Ş

```
RESULT
ID US
                                                                                                                                                                   Query Match
Best Local S
Matches 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08/086,915
FILING DATE: 07-JUL-1993
CLASSIFICATION: 36
ATTORNEY/AGENT INFORMATION: 36
NAME: KUDOVCLK, RODALD J.
REGISTRATION NUMBER: 25.401
REFERENCE/DOCKET NUMBER: 15873005
REFERENCE/DOCKET NUMBER: 25.401
REFERENCE/DOCKET NUMBER: 25.401
REFERENCE/DOCKET NUMBER: 25.401
REFERENCE/DOCKET NUMBER: 15873005
TELEPHONE: 202-467-6300
TELEPHONE: 202-467-6300
TELEPAN: 202-466-2006
INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                             MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORCANISM: Homo sapiens
DEVELOPMENTAL STAGE: Adult
Sequence 138 BP; 24 A; 51 C; 42 G; 21 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2, Application US/08086915
Patent No. 5444167
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-086-915-2 STANDARD; DNA; UNC; 138 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 2, Application US/08086915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JAN-1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       XXXXX
662
                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 138 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Re-lease #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Pettersson, Kim SI
TITLE OF INVENTION: Variant Luteinizing Hormone Encoding DNA
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAGAAACAGAACACCGTGTG 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Washington STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 20036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Adduci, Mastriani, Schaumberg & Schill STREET: 1140 Connecticut Avenue, N.W., Suite 250
                                                                                                                                                                   104;
                                                                                                                                                                                   similarity 99.0%;
                                                                                                                                                                   Conservative
                                                                                                                                                                Score 103; DB 5; Length 138; Pred. No. 5.77e-57; 0; Mismatches 1; Indels
                                                                                                                                                              Indels
                                                                                                                                                              0;
                                                                                                                                                              Gaps
                                                                                                                                                              0;
```

Ş

В

Ş 밁

Search completed: Wed May 6 10:31:18 1998 Job time: 142 secs.

	[] [] [] [] [] [] [] [] [] [] [] [] [] [
*****	
***************************************	
****	(TM)

Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_nn n.a. • n.a. database search, using Smith-Waterman algorithm

Tabular output not generated. Run on: Wed May 6 12:20:06 1998; MasPar time 1075.89 Seconds 1491.095 Million cell updates/sec

Description:
Perfect Score:
N.A. Sequence:
Comp: >US-08-804-166-1 (1-1049) from US08804166.seq 1049

1 TCCACATGGCTACAGGTAAG.......TATTATCACAAATCTTAAG 1049
AGGTGTACCGATGTCCATTC.....AATAATAGTGTTTAGAATTC

Scoring table: TABLE default Gap 6

Nmatch

STD :

Dbase 0; Query 0

Searched: 436399 seqs, 764661465 bases x 2

Post-processing: Minimum Match 0% Listing first 45 summaries

Database:

1:em\_in 2:em\_or 3:em\_om 4:em\_ov 5:em\_pl 6:em\_htg 7:em\_hum1 8:em\_hum2 9:em\_ba 10:em\_ro 11:em\_un 12:em\_vi 13:em\_pat

genbank105

Database:

14:gb\_ro 15:gb\_om 16:gb\_ov 17:gb\_in 18:gb\_pl 19:gb\_ba 20:gb\_st 21:gb\_vi 22:gb\_ph 23:gb\_sy 24:gb\_un 25:gb\_pat 26:gb\_htg 27:gb\_pr1 28:gb\_pr2

Statistics: Mean 11.026; Variance 4.973; scale 2.217

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

11331111111111111111111111111111111111	Result
44444444444444444444444444444444444444	Score
44444444444444444444444444444444444444	Query
483 510 600 1331 1368 2050 2062 2067 2111 2111 2111 2111 2111 2111 2111 21	Length DB
227	B
A29099 A21525 A20257 A29103 A29103 A29098 HUMTNERP I43805 A21522 HUMTNERR A21522 HUMTNERRB A26412 HUMTNERCL	ID
Synthetic DNA for TNF- oligonucleotide probe. Synthetic nucleotide s Synthetic nucleotide s H.sapiens mRNA for TNF- Synthetic DNA for TNF- Human tumor necrosis f Sequence 24 from paten TNF alpha gene. Human tumor necrosis f Homo sapiens tumor nec cDNA for (55kD TNF-BP) Human tumor necrosis f H.sapiens TNF-R mRNA f Sequence 1 from Patent	Description
0.00e+000 0.00e+000 0.00e+000 0.00e+000 0.00e+000 0.00e+000 0.00e+000 0.00e+000 0.00e+000 0.00e+000 0.00e+000	Pred. No.

45	44	43	42	41	40	39	3 <b>8</b>	37	36	35	34	ω ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	7
239	240	245	245	248	250	255	255	258	297	298	298	300	300	300	300	302	302	304	326	370	370	372	379	381	381	417	420	424	424	424
	22.9																•				•	•	•		•			•		
	2440								2004					1964																
27	15	27	25	27	27	25	25	27	15	25	27	25	27	27	25	25	25	15	27	25	25	25	25	25	25	25	25	25	25	25
HUMCS5	BTU90937	HUMPLA	I02856	HUMCS1	HUMCS3	A20263	I43811	HSGONA	SSU19994	I63120	HUMGHN	141411	HUMGH	HSGROW2	I02855	I43809	A20259	FCU72344	HUMGHCSA	A20253	I43787	A20254	I43786	I43813	$\rightarrow$	A20255	I43808	126928	A19907	TC/ PGT
Human chorionic somato	н	Human placental lactog		Human chorionic somato	Human chorionic somato	Synthetic nucleotide s	Sequence 53 from paten	Human messenger RNA fo	a p55 TNF r	Õ	owth hormone	Sequence 5 from patent	growth hormone	Ħ	1 f	Sequence 49 from paten	Synthetic nucleotide s		Human growth hormone (	C D	w	c nucle	r f	Sequence 56 from paten		eptor gei	7 from pa	Sequence 2 from patent	nucleo	
.60e-	5.52e-185	.37e-	.37e-	.35e-	.37e-	.20e-	.20e-	.39e-	.05e-	.23e-	.23e-	.71e-	.71e-	.71e-2	.71e-	.37e-2			1.10e-264		_	0.00e+00		0.00e+00	•	0.00e+00	0.00e+00	0.00e+00	•	O. OVETOO

## ALIGNMENTS

```
皮
             밁
                           Š
                                            밁
                                                        Ş
                                                                            밁
                                                                                          Ş
                                                                                                           밁
                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
JOURNAL
                                                                                                                                                                                                                                                                                                                                     KEYWORDS
SOURCE
ORGANISM
                                                                                                                                            밁
                                                                                                                                                          Ş
                                                                                                                                                                             밁
                                                                                                                                                                                            â
                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                             ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                 DIN
                                                                                                                                                                                                                            Query Match 40.4%;
Best Local Similarity 99.8%;
Matches 425; Conservative
                                                                                                                                                                                                                                                                                      source
            394
                            644
                                                            584
                                                                                              524
                                            334
                                                                             274
                                                                                                            214
                                                                                                                              464
                                                                                                                                    154 TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                          404
                                                                                                                                                                                                                                                                                                                                                                                                                                764
                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 464
                                                                                                                                                                    94 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGGAGGATACGGAC 153
                                                         CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT 333
                         AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                           AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                TCCTGT 769
                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTGT 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
unidentified unidentified unclassified.
                                                                                                                                                                                                                                                                                                      Patent:
                                                                                                                                                                                                                                                                                                                                                                       oligonucleotide probe A21525
                                                                                                                                                                                                                                                                                                                                                               g583574
                                                                                                                                                                                                                                                                                                                                                                                                A21525
                                                                                                                                                                                                                                                                                                                      (bases 1 to
                                                                                                                                                                                                                                                                      136
                                                                                                                                                                                                                                                                       œ
                                                                                                                                                                                                                                                                                                      GB 2246569-A 4
                                                                                                                                                                                                                                                                  /organism="Artificial sequences"
132 c 133 g 109 t
                                                                                                                                                                                                                                                                                          ש 2246569-A 4 05-FEB-1992;
Location/Qualifiers
                                                                                                                                                                                                                                                                                      .510
                                                                                                                                                                                                                                                                                                                                                                                               510
                                                                                                                                                                                                                                                                                                                     510)
                                                                                                                                                                                                                                                                                                                                                                                              đđ
                                                                                                                                                                                                                           Score 424; DB 25; Length 510;
Pred. No. 0.00e+00;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                              PAT
                                                                                                                                                                                                                                                                                                                                                                                              26-JUL-1994
                                                                                                                                                                                                                            0
                                                                                                                                                                                                                            Gaps
                                          393
                                                                                          583
                                                                                                           273
                                                                                                                           523
                                                                                                                                          213
                                                                                                                                                           463
                                                                                                                                                                                                                                                                                                                                                                                                                                                               763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
           453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                523
                                                                                                                                                                                                                            0
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
ORIGIN
                                 LOCUS
                                                                             Ş
                                                                                                                        ş
                                                                                                                                                밁
                                                                                                                                                                      Ş
                                                                                                                                                                                              밁
                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ş
                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Simi
Matches 425;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                       644
                                                                                          541 TCCTGT 546
                                                                                                                          704
                                                                                                                                               481
                                                                                                                                                                                             421
                                                                                                                                                                                                                   584
                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                 524
                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                             464
                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                           404
                                                                                                                                                                                                                                                                                                                                                                     181 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 240
                                                                                                                                                                                                                                                                                                                                                                                                      344 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC 403
                                                                                                                                                                                                                                                                                                                                                                                                                   121 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    764 TCCTGT 769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               454 TCCTGT 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                  y Match
Local Similarity 99.8%;
hes 425; Conservative
                                                                                                                                                                                                                 TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                          TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCTGT 769
                                                                                                                                                                                           TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                            TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                         AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                              AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                unidentified unidentified unclassified.
H.sapiens mRNA for TNF-binding A29103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic nucleotide sequence of plasmid p-TNFRecd A20257
                                 A29103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g1247896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MODIFIED HUMAN TNFALPHA (TUMOR NECROSIS FACTOR ALPHA) RECEPTOR PATENT: WO 9207076-A 25 30-APR-1992;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A20257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="artificial sequence"
/db_xref="taxon:29278"
157 c 162 g 133 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="unidentified"
/db_xref="taxon:32644"
1. .600
                                1331 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        600)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 424; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 1
                                 DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
         polypeptide from
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Indels
                                PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 600;
        patent EP0393438
                                03-JUL-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                          763
                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                      703
                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                            523
                                                                                                                                                                                                                                                                                                                                                        463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     763
                                                                                                                                                                                                                                                              583
                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
REFERENCE
AUTHORS
TITLE
                                                       REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE CO
                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                         昂
                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                         Ŷ
                                                                                                                                                                                                                                                                                                                                                                                                                                                  용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                       RESULT
LOCUS
                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                          DIN
                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                       FEATURES
                                                                                                                          KEYWORDS
                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNT
                                                                                                                                                                                                                                                                                                                                                                               584
                                                                                                                                                                                                                                                                                                                                                                                                      573
                                                                                                                                                                                                                                                                                                                                                                                                                             524
                                                                                                                                                                                                                                                                                                                                                                                                                                                   513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  333 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 392
                                                                                                                                                                                                                                      764
                                                                                                                                                                                                                                                           753
                                                                                                                                                                                                                                                                                   704
                                                                                                                                                                                                                                                                                                                                  644
                                                                                                                                                                                                                                                                                                                                                        633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     344 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   y Match
Local Similarity 99.8%;
hes 425; Conservative
                                                                                                                                                                                                                                                                                                                                                                           CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 452
                                                                                                                                                                                                                                                                                                                              AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                   G
                                                                                                                                                                                                                                                   ICCIGT 758
                                                                                                                                                                                                                                                                                  AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                       TCCTGT
                                                                                                                                                                                                                                                                                                        Homo sapiens
Eukaryotae; m
Vertebrata; E
                                                                                                                                                 Synthetic
A29098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; H 1 (Dases 1 to 1331)
Hauptmann, R., Himmler, A., Maurer-Fogy, I. and Stratowa, C.
TNF-receptor; TNF-binding protein and DNA coding therefo
Patent: EP 0393438-A 53 24-OCT-1990;
BOEHRINGER INGELHEIM INTERNATIONAL G.M.B.H
                             1 (bases 1 to 1368)
Hauptmann, R. Himmler, A., Maurer-Fogy, I. and Stronger-receptor, TNR-binding protein and DNA coding patent: EP 0393438-A 48 24-OCT-1990;
BOEHRINGER INGELHEIM INTERNATIONAL G.M.B.H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g1247517
                                                                                                        unidentified
                                                                                                                                      g1248892
                                                                                                                 unidentified
                                                                                                                                                                                       A29098
                                                                                           unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/db_xref="taxon:9606"
407 c 343 a 28:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                      Location/Qualifiers
                                                                                                                                                               DNA
/organism="unidentified"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mitochondrial eukaryotes; Metazoa; Chordata; Eutheria; Primates; Catarrhini; Hominidae; H
                                                                                                                                                                                      1368
                                                                                                                                                                for
                                                                                                                                                             TNF-receptor from patent EP0393438.
                                                                                                                                                                                     ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 424; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             283 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>بر</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1331;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                   Stratowa
                                                         therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                  572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     403
                                                                                                                                                                                                                                                                                                                                703
                                                                                                                                                                                                                                                                                                                                                        692
                                                                                                                                                                                                                                                                                                                                                                               643
                                                                                                                                                                                                                                                                                                                                                                                                    632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       463
                                                                                                                                                                                                                                                                                                                                                                                                                           583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
BASE COUNT
ORIGIN
                                                                                                                                           JOURNAL
MEDLINE
COMMENT
                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                      DEFINITION ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                  REFERENCE
                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 425; Conser
                                                                                                                                                                                                      AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                           sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                            764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGACACCGTGTGTGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACACCTCAGACACCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATAGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                 σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTGT 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAACAGAACACCGTGTGCACCTGCCATGCAGGTTTCTTAGGAGAAAACGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AMACAGAACACCGTGTGCACCTGCCATGCAGGTTTCTTTCTAAGAGAAAAACGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                        Gray, P.W., Barrett, K.J., Chantry, D., Turner, M. and Feldman, M. Cloning of human tumor necrosis factor (TNF) receptor cDNA an expression of recombinant soluble TNF-binding protein Proc. Natl. Acad. Sci. U.S.A. 87, 7380-7384 (1990) 91017509
                                                                                                               Draft entry and computer-readable sequence for Sci. U.S.A. (1990) In press] kindly submitted by P.W.Gray, 13-AUG-1990.
                                                                                                                                                                                                                                                                                                                   g339759
TNF receptor; transmembrane receptor;
                                                                                                                                                                                                                                                                                                                                                      Human tumor necrosis M60275 M37764
                                                                                                                                                                                                                                              Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; H
                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                            Human placenta, cDNA to
                                                                                                                                                                                                                                  (bases 1 to 2050)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              293
                                                                                                                                                                                                                                                                                                                                                                                                                                                            769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40.4%;
larity 99.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="artificial s
/db_xref="taxon:29278"
a 424 c 375 g
/tissue_type="placenta"
155. .274
/gene="TNF receptor"
155. .1516
                                                       /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'db_xref="taxon:32644"
                                                                                                 ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                  2050
                                                                                                                                                                                                                                                                                                                                                                                                 dq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 424;
Pred. No. 0.
0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                    factor receptor(TNF) mRNA,
                                                                                                                                                                                                                                                                                             mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 25;
                                                                                                                                                                                                                                                                                                                          tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1368;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                         necrosis factor
                                                                                                                                              (Proc.
                                                                                                                                                                                                                                                                                                                                                                    complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                 11-OCT-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                              Natl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      643
                                                                                                                                              Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
JOURNAL
FEATURES
                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                   KEYWORDS
SOURCE
                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                         RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                     644
                                                                                                                                                                                                                                                                                                                                                                                                                                  575
                                                                                                                                                                                                                                                                                                                                                                                                                                                               584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                275 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 334
                                                                                                                                                                                                                                                                                   764
                                                                                                                                                                                                                                                                                                                                              704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    344
                                                                                                                                                                                                                                                                                                                                         CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCTGT
                                                                                                                                                                                                                                                                                                               TCCTGT 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCAGGGAGTGTGAGAGCGGCTCCTTCACCACAAAAACCACCTCAGACACTGCCTC 454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GATAGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                              Sequence
143805
                      Feldmann,M., Gray,P.W., Turner,M.J.C. and Brennan, TNF.alpha. receptor-derived binding protein Patent: US 5633145-A 24 27-MAY-1997;
Location/Qualifiers
                                                                                                                      Unknown
                                                                                       Unclassified.
1 (bases 1 to 2062)
                                                                                                                                   Unknown.
                                                                                                                                                               g2468903
                                                                                                                                                                                                                         I43805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           h 40.4%;
Similarity 99.8%;
425; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      429
                                                                                                                                                                                                                                                                                   769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LLR"
155. .274
/gene="TNF |
275. .1513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /codon_start=1
/product="TNF receptor"
/db_xref="pid: 339760"
/db_xref="pid: 339760"
/translation="MGLSTVPDLLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
PGGKY IHPONNSICCTKCHKGTYLYNDCPGPGGDTDCDECESSGSTASSINLEHCLSC
SKCRKEMGOVELSSCTVDEDTVGGCRNAOYSHEWSENLFOCENGCSLCLNGTUHLSCQE
KONTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTTVLLPLVI
FFGLCLLSSLFIGLMYRYGRWSSKLYSIVCGKSTPEKBGELEGTTTKFLAPNESFSPT
PGFTPTLGFSVPSSTTTSSSTTTPGDCPHFAAPRREVAPPYQGADFILATALASDPI
PNPLQKWEDSAHKPQSLDTDDPATLYAVVENVPPLRWKEFVRRLGLSCHEIDRLELQN
GRCLREAQYSMLATWRRRTRREATLELLGRVLRDMDLLGCLEDIEEALCAPPLPPAPS
                                                                                                                                                                                            24
1. .2062
/organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /product="INF receptor" 611 c 566 g 4
                                                                                                                                                                                            from patent US 5633145.
                                                                                                                                                                                                                         2062
                                                                                                                                                                                                                        ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            receptor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 424; DB 27;
Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 2050;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                     694
                                                                                                                                                                                                                                                                                                                                                                                                                               634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         463
                                                                                                                                                                                                                                                                                                                                                                                                   703
                                                                                                                                                                                                                                                                                                                                                                                                                                                            643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

Ş 밁 ð 밁 VQ. 밁 å 밁 Ş 밁 Ś 밁 δ 밁 Ş 밁

```
REFERENCE
AUTHORS
JOURNAL
                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                        RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                      gene
                                                                                                                   SgS
                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                       695
                                                                                                                                                                                                                                                                                                                                                                                                                                                      644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              275 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                             704
                                                                                                                                                                                                                                                                                                                                                                  764
                                                                                                                                                                                                                                                                                                                                                                                       ICCIGI
                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                  TCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                           TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TICCAGTGCTICAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                         Homo sapiens
Eukaryotae; m
Vertebrata; E
                                                                                                                                                                                                                                                                                         TNF alpha
A21522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 Similarity
425; Conser
                                                                                                                                                                                             Patent:
                                                                                                                                                                                                                                                                               g579599
                                                                                                                                                                                                                                                                                                                         A21522
                                                                                                                                                                                                                                                           human.
                                                                                                                                                                                                                 (bases 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   429
                                                                                                                                                                                                                                                                                                                                                                  769
                                                                                                                                                                                                                                                                                                                                                                                      700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40.4%;
larity 99.8%;
Conservative
                                                                                                                                                                                          GB 2246569-A 1 05-FEB-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
     /db_xref="taxon:9606"
155. .1522
PNPLQXWEDSAHXPQSLDTDDPATLYAVVENVPPLXWXEFVRRLGLSDHEIDRLELQN
                                                                                              codon_start=
                                                                                                       /gene="INF alpha gene"
                                                                                                                           gene="INF alpha gene"
                                                                                                                                                                               ocation/Qualifiers
                                                                                                                                                                                                                                                                                                    gene.
                                                                                                                                                                                                               mitochondrial eukaryotes; Metazoa; Chordata;
Eutheria; Primates; Catarrhini; Hominidae; H
to 2062)
                                                                                                                                                                                                                                                                                                                        2062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   O
                                                                                                                                                                                                                                                                                                                        ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 424; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   573
                                                                                                                                                                                                                                                                                                                        RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rt
                                                                                                                                                                                                                                                                                                                        PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 2062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                        26-JUL-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                             763
                                                                                                                                                                                                                                                                                                                                                                                                                                  694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          334
                                                                                                                                                                                                                                                                                                                                                                                                                                                      703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                      RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                 COMMENT
                                                                                                                                                                                                                                                   NID
                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 42
                                                                                                                           MEDLINE
                                                                                                                                   JOURNAL
                                                                                                                                                      TITLE
                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             344
                                                                                                                                                                                                                                                                                                                                              695
                                                                                                                                                                                                                                                                                                                                                                                                      644
                                                                                                                                                                                                                                                                                                                                                                                                                        575
                                                                                                                                                                                                                                                                                                                                                                                                                                          584
                                                                                                                                                                                                                                                                                                                                                                                                                                                             515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           335
                                                                                                                                                                                                                                                                                                                            764
                                                                                                                                                                                                                                                                                                                                                                 704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity 99.88;
                                                                                                                                                                                                                                                                                                                                                                                                  TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTCCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATAGTGTGTGTCCCCAAGGAAAATATATATCCACCTCAAAATAATTAGTTGCATTTGCTGTACC 334
                                                                                                                                                                                                                                                                                                                                                                          AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 394
                                                                                                                                                                                                                                                                                                ø
                                                                                                                                                                                                                                                                                                                            TCCTGT
                                                                                                                                                                                                                                                                                                                                              TCCTGT 700
                                                                                                                                                                                                                                                                                                                                                                 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATAGTGTGTGTCCCCCAAGGAAAATATATCCACCCTCAAAATAATAATTCCATTTGCTGTACC 403
                                                                                                                                                                                                                      g339744
cell surface receptor; t
Human placenta, cDNA to
                                                                                                                                  necrosis
Cell 61,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   425;
                                                                                                                                                             Schall, T.J., Lewis, M., Koll
Gatanaga, T., Granger, G.A.,
Goeddel, D.V.
                                                                                                                                                                                       Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; H (bases 1 to 2087)
                                                                                                                                                                                                                                                                    Human tumor
                                                                                                                                                                                                                                                                                      HUMTNFR
                                                                                                                                                    Molecular cloning and expression
                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 429
                                                                                                                                                                                                                                                                                                                           769
                                                                                                       entry and computer-readable schall, 26-MAR-1990.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PSLLR"
a 617
                                                                                                                                  factor
361-370 (1990)
Locati
                                                                 /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                 /note="tumor necrosis factor
                                                           182. .1549
                                                                                                                                                                                                                                                                    necrosis
                                                                                                                                                                                                                                                                                     2087
                                                                                              on/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ი
                                                                                                                                                                                                                                                                                    ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 424; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                                                                                                  factor receptor mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 573
                                                                                                                                                                    Koller, K.J., Lee, A.L., Rice, G.C., Wong, G.H., A., Lentz, R., Raab, H., Kohr, W.J. and
                                                                                                                                                                                                                             tumor necrosis factor receptor.
o mRNA.
                                                                                                                                                                                                                                                                                      mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 443
                                                                                                                                                     of a
                                                                                                                sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4
                                               receptor"
                                                                                                                                                     receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                  complete cds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                for
                                                                                                                                                                                                 Hominidae; Homo
                                                                                                                                                     for human tumor
                                                                                                                [1] kindly submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                    703
                                                                                                                                                                                                                                                                                                                                                                                                                      634
                                                                                                                                                                                                                                                                                                                                                                                                                                                           574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               514
                                                                                                                                                                                                                                                                                                                                                                763
                                                                                                                                                                                                                                                                                                                                                                                  694
                                                                                                                                                                                                                                                                                                                                                                                                                                        643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                           DEFINITION ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ωy
                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                      LOCUS
                                                                                                                                                                                                                                               RESULT
                                                                            FEATURES
                                                                                                                                           REFERENCE
                                                                                                                                                                                SOURCE
                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 42
                                                                                     JOURNAL
MEDLINE
                                                                                                               TITLE
                                                                                                                                  AUTHORS
                                                                                                                                                                      ORGANISM
                            sig_peptide
                                                                                                                                                                                                                                                                                                                                                      644
                                                                                                                                                                                                                                                                                                                                                                         602
                                                                                                                                                                                                                                                                                                                                                                                          584
                                                                                                                                                                                                                                                                                                                                                                                                                               524
                                                                                                                                                                                                                                                                                                                                                                                                                                                 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        404
                                                                                                                                                                                                                                                                           764
                                                                                                                                                                                                                                                                                              722
                                                                                                                                                                                                                                                                                                                                   662
                                                                                                                                                                                                                                                                                                                                                                                                             542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           362
                                                                                                                                                                                                                                                                                                                 704
                                                                                                                                                                                                                                                10
                                                                                                                                                                                                                                                                           TCCTGT
```

```
TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTGT 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGTGCCACAAAGGAACCTACTTGTACAATGACTSTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 421
                                                                                                                                                                                                   Eukaryotae; mitochondrial eukaryotes; Metazoa; Vertebrata; Eutheria; Primates; Catarrhini; Hom 1 (bases 1 to 2111)
Loetscher, H., Pan, Y.-C.E., Lahm, H.-W., Gentz, R. Tabuchi, H. and Lesslauer, W. Molecular cloning and expression of the human 5
                                                                                                                                                                                                                                                                                                                          g339753
tumor necrosis factor receptor.
Human cell line HL60, cDNA to m
                                                                                                                                                                           factor receptor Cell 61, 351-35
                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens 1
M58286 M33480
                                                                                                                                                                                                                                                                                                                                                                                                                                         HUMTNERB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KONTYCTCHAGEFLRENECYSCSNCKKSLECTKLCLPQIENVKGTEDSGTTYLLPLVI
FFGLCLLSILFIGIMYRYQRWKSKLYSIYCGKSTPEKEGELEGTTKRLAPNPSFSPT
PGFTPTLGFSPVPSSTFTSSSTYTPGDCPNFAAAPRREVAPPYQGADPILATALASDPI
PNPLQKWEDSAHKPQSLOTDDPATLYAVYENYPPLRWKEEYRRLGISDHEIDRLELQN
GRCLREAQYSMLATWRRRTPRREATLELLGRYLRDMDLLGCLEDIEEAALCGPAALPPA
                                                     /cell_line="HL60"
187. .273
                                                                                                                                                                             351-359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PSLLR"
/gene="TNF receptor"
/product="tumor necro
187. .1554
                                                                                     /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40.4%;
                                                                                                                                                                                                                                                                                                                                                                                                        tumor necrosis factor
                                                                                                                                                                                                                                                                                                                                                                                                                                         2111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           624 c
                                                                                                                                                                                                                                                                                                                                                                                                                                         ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 424; DB 27;
Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                   cDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       581 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
                  necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             449
                  factor
                                                                                                                                                                                                                                                                                                                                                                                                       receptor mRNA,
                                                                                                                                                                                                                                             Gentz, R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 2087;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                Hominidae;
                                                                                                                                                                                                            55 kd tumor necrosis
                                                                                                                                                                                                                                                                                                  Chordata;
                                                                                                                                                                                                                                               Brockhaus, M.
                                                                                                                                                                                                                                                                                                                                                                                                       complete
                                                                                                                                                                                                                                                                                                                                                                                                                                         14-NOV-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                          cds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
```

```
RESULT
LOCUS
                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                  SOURCE
                                                                                                  KEYWORDS
                                                                                                                                                                        DEFINITION
                                                                                                                                       ACCESSION
                 AUTHORS
                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                307 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTTGCTGTACC 366
                                                                                                                                                                                                                                                                             764
                                                                                                                                                                                                                                                                                                              727
                                                                                                                                                                                                                                                                                                                                                                                                                   644
                                                                                                                                                                                                                                                                                                                                                                                                                                                     607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    344
                                                                                                                                                                                                                                                                                                                                                 704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity 99.8%;
les 425; Conservation
                                                                                                                                                                                                                           11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATAGTGTGTGTCCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC 403
                                                                                                                                                                                                                                                                                                            TCCTGT 732
                                                                                                                                                                                                                                                                                                                                                                                                              TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 426
                                                                                                                                                                                                                                                                             TCCTGT 769
                                                                                                                                                                                                                                                                                                                                                                AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAAACCTT 606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 463
1 (bases 1 to 2111)
Brockhaus, M., Dembic, Z.,
Schlaeger, E.J.
                                                                                                                  patent EP0417563.
A26412
g904968
                                                                                                                                                                      cDNA for (55kD TNF-BP)
                                                  unclassified.
                                                                   unidentified
                                                                                  unidentified
                                                                                                                                                                                                         A26412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product="tumor necrosis factor receptor"
/db_xref="pl0:9339754"
/db_xref="pl0:9339754"
/translation="MGISTVPDLLPRIVILEILVGIYPSGVIGLVPHLGDREKRDSVC
POGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHIRHCLSC
SKCRKEMGQVEISSCTVDRDTVCGCRKNOYRHYWSENLFQCFWCSLCLNGTVHLSCQE
KQNTVCTCHAGAFFLRSMECVSCSKKSLESTRICLFQCIENVKGTEDSGTVLLFVQI
EFGLCLLSLIFIGLMYRYQRWKSKLYSIVCGKSTPEKEGELEGTTTKPLAPNPSFSPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="TNF receptor"
274. .1551
/gene="TNF receptor"
/gene="TNF receptor"
/product="tumor necrosis factor
1 629 c 587 g 450 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PNPLQKWEDSAHKPQSLDTDDPATLYAYVENYPPLRWKEFYRRLGLSDHEIDRLELQN
GRCLREAQYSMLATWRRRTPRREATLELLGRYLRDMDLLGCLEDIEEALCGPAALPPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene="INF receptor"
/note="55 kDa"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PGFTPTLGFSPVPSSTFTSSSTYTPGDCPNFAAPRREVAPPYQGADPILATALASDPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PSLLR"
                                                                                                                                                                                                        2111 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 424; DB 27;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                      tumor
                                                                                                                                                                                                         DNA
                Gentz, R.,
                                                                                                                                                                      necrosis
                Lesslauer,W.,
                                                                                                                                                                  factor binding protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Indels 0;
                                                                                                                                                                                                        PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 2111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    receptor"
                 Loetscher, H.
                                                                                                                                                                                                        26-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                763
                                                                                                                                                                                                                                                                                                                                                                                                                  703
                                                                                                                                                                                                                                                                                                                                                                                                                                                  666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          523
                 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

Ş 용 Ş B δõ ઠ Ş 멍 20 밁 Ş 밁 Š 밁 Ş 퉑

DIN

```
ş
                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    무
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ğ
                                                                                                                NID
                                                                                                                                                                                                                           RESULT
                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
       REFERENCE
                                                                             SOURCE
                                                                                            KEYWORDS
                                                                                                                                   ACCESSION
                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                         FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             307 GATAGTGTGTGTCCCCAAGGAAAATATATCCCACCCTCAAAATAATTCGATTTTGCTGTACC 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            344
                                                                                                                                                                                                                                                                                764
                                                                                                                                                                                                                                                                                                                  727
                                                                                                                                                                                                                                                                                                                                                    704
                                                                                                                                                                                                                                                                                                                                                                                                                             644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       404
                                                                                                                                                                                                                         12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 426
                                                                                                                                                                                                                                                                                                                                                                          AAACAGAAACACCGTGTGCACCTGCCATGCAGGTTTTCTTAGAGAGAAAAACGAGTGTGTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                  TCCTGT 732
                                                                                                                                                                                                                                                                                                                                                       TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTCACAGAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                TCCTGT 769
                                                                                                                                                                                                                                                                                                                                                                                                                             TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  425;
Homo sapiens
Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; H
1 (bases 1 to 2112)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TNF-binding proteins
Patent: EP 0417563-A 24 20-MAR-1991;
F. HOFFMANN-LA ROCHE AG
                                                                       tumor necrosis factor
Human cDNA to mRNA.
                                                                                                              M63121 M75861
g339755
                                                                                                                                                                   Human tumor necrosis
                                                                                                                                                                                                         HUMTNFRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   h 40.4%;
Similarity 99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /codon_start=1
/product="55 kD TNF-BP"
/db_xref="55 kD TNF-BP"
/db_xref="510:9904969"
/db_xref="910:9904969"
/translation="MGLSTVPDLLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
/translation="MGLSTVPDLLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
/translation="MGLSTVPDLTLYNDCPGPGQDTDCRECESGSTTASENHLRGLSC
SACRKEMGQVEISSCTVPLOTDTVVGCRKNQYREWSENLFQCFWCSLCLNGTVHLSCLSC
SACRKEMGQVEISSCTVPLOTDTVGCRKNQYREWSENLFQCFWCSLCLNGTVHLFULPLVI
FGGLCLLSLLFIGLMYRYQRWSKILYSIVCGKSTPEREGELEGTTTKPLAPNPSFSPT
FGGLCLLSLLFIGLMYRYQRWSKILYSIVCGKSTPEREGELEGTTTKPLAPNPSFSPT
FGGLCLLSLLFIGLMYRYQRWSKILYSIVCGKSTPEREGELEGTTTKPLAPNPSFSPT
FGGLTPTLGESVPYSSTTFTGSSTTTGDCPNFAAPRREVAPPYQGADPILAPLALASDFI
PNPLQKWEDSAHKPQSLDTDDPATLIAVYENVPPLRWKEFYRRLGLSDHEIDRLELQN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism-"Artificial 187. .1554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             187. .1554
/note="pid:e161624"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        629 c
                                                                                                                                                                                                         2112
                                                                                                                                                                                                       ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 424; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                   factor receptor (TNF receptor) mRNA, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      587 g
                                                                                             receptor
                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 2111;
                                                                                                                                                                                                         30-SEP-1991
                          Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                         726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            403
                                                                                                                                                                                                                                                                                                                                                       763
                                                                                                                                                                                                                                                                                                                                                                                                                             703
                                                                                                                                                                                                                                                                                                                                                                                                                                                               666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     463
```

```
Ş
                                    밁
                                                                 Š
                                                                                                          밁
                                                                                                                                     δÃ
                                                                                                                                                                               밁
                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 40.4%;
Best Local Similarity 99.8%;
Matches 425; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             327 GATAGTGTGTGCCCCAAGGAAAATATATCCACCCTCAAAATAATTAGTTGGATTTGCTGTACC
                                  747
                                                                                                                                                644
                                                                                                                                                                                     627
                                                                                                                                                                                                                          584
                                                                                                                                                                                                                                                             567
                                                                                                                                                                                                                                                                                                   524
                                                                                                                                                                                                                                                                                                                                      507
                                                                                                                                                                                                                                                                                                                                                                           464
                                                                                                                                                                                                                                                                                                                                                                                                           447
                                                                                                                                                                                                                                                                                                                                                                                                                                                    404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           344
 764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC 403
 TCCTGT 769
                       TCCTGT 752
                                                                     TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                         CGGGACACCGTGTGTGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                          TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                      CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                               AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                         TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Molecular cloning and expression of human and rat tumor necrosis factor receptor chain (p60) and its soluble derivative, tumor necrosis factor-binding protein DNA Cell Biol. 9, 705-715 (1990) 91090841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Himmler,A., Maurer-Fogy,I., Kroenke,M., Scheurich,P.,
Pfizenmaier,K., Lantz,M., Olsson,I., Hauptmann,R., Stratowa,C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Adolf,G.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /product="tumor necrosis factor receptor"
/db_xref="pip:9339756"
/db_xref="pip:9339756"
/translation="mglsTvpDtLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
/translation="mglsTvpDtLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
POGKYIHPONNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLEHCLSC
SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVGTEDDSGTTVLPIVI
FFGLCLLSLLFIGLMYRYQRWKSKYSIVCGGKFTPEKEGELEGTTTKFDAPNPSFFD
PFGFCLLSLLFIGLMYRYQRWKSKYSIVCGGKFTPEKEGLEGTTTKFDAPNPSFPT
PGFTPFLGFSBVPPSSGTTFSSSTYTFGDCPNFABPRREVAPPYOGADFILATALASDFI
PNPLQKWEDSAHKPQSLDTDDDPATLYAVVENVPPLRWKEFVRRLGLSDHEIDRLELQN
GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/db_xref="taxon:9606"
207. .293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene="TNF receptor" 294. .1571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="TNF receptor"
/product="tumor necrosis factor receptor"
632 c 589 g 456 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="TNF receptor" 207. .1574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /codon_start=:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'gene="TNF receptor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 424; DB 27; Length 2112; Pred. No. 0.00e+00; 0; Mismatches 1; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                        746
                                                                                                                                                                                 686
                                                                                                                                                                                                                                                         626
                                                                                                                                                                                                                                                                                               583
                                                                                                                                                                                                                                                                                                                                  566
                                                                                                                                                                                                                                                                                                                                                                       523
                                                                                                                                                                                                                                                                                                                                                                                                           506
                                                                                                                                                                                                                                                                                                                                                                                                                                                463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              386
                                                                                                                                            703
                                                                                                                                                                                                                      643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
JOURNAL
MEDLINE
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
LOCUS
Ş
                                밁
                                                             Š
                                                                                              吊
                                                                                                                           δÃ
                                                                                                                                                               밁
                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NID
                                                                                                                                                                                                               Query Match
Best Local S
                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                 polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                 polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                             404
                                                                                                436
   464
                                                                                                                                                                                                               Y Match 40.4%;
Local Similarity 99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13
                                                             AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 495
   TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACCTGCCTC
                                                                                                                                                                                                425;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBO J. 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the receptor EMBO J. 9 (10), 3269-3278 (1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Aderka,D., Holtmann,H. and Wallach,D.
Soluble forms of tumor necrosis factor receptors (TNF-Rs). The for the type I TNF-R, cloned using amino acid sequence data of soluble form, encodes both the cell surface and a soluble form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Holdases to 2161)
1 (bases 1 to 2161)
Nophar, Y., Kemper, O., Brakebusch, C., Englemann, H., Zwang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g37223
TNF-R gene; tumor necrosis factor receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       H.sapiens TNF-R mRNA for tumor necrosis factor receptor type 1. x55313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HSTNFR1A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                  459
                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                              2145. .2150
/gene="TNF-R"
/note="putative"
2161
                                                                                                                                                                                                                                                                                  ø
                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene="TNF-R"
634. .756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="TNF-R"
/codon_start=1
/codon_start=1
/product="tumor necrosis factor receptor type 1"
/product="tumor necrosis factor receptor type 1"
/db_xref="piD:g37224"
/db_xref="SWISS-PROT:P19438"
/translation="MGLSTVEDILLEVYLLELLVGIYPSGVIGLVPHLGDREKRDSVC
POGKXIHPONNSICCTKCHKGTYLYNDCPGPGODTDCRECESGSFTASENHLHHCLSC
SKCRKEMGQVEISSCTVDRDTYCGCRKNGYRHYWSENLFOCFNCSLCLMGTVHLSCQE
KQNTYCTCHAGFFLRENECYSCSNCKKSLECTKLCLPQIEN/KGTEDSGTTVLLPLVI
KQNTYCTCHAGFFLRENECYSCSNCKKSLECTKLCLPQIEN/KGTEDSGTTVLLPLVI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
256. .2161
                                                                                                                                                                                                                                                                                                                                                                 /gene="TNF-R"
2145. .2150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FFGLCLLSLLFIGLMYRYQNWKSKLYSIVCGKSTPEKEGELEGTTTKPLAPNPSFSPT
PGFTPTLGFSVPGSTTTSSSTYTPGGCPNFAAPREVAPPYGCADPILATALASDPI
PNPLOKWEDSAHKPOGLDTDDPATLYANVENVPPLRWKEFVRRLGLSDHEIDRLELQU
GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPPA
                                                                                                                                                                                                                                                                                /gene="TNF-R"
642 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="TNF-R"
                                                                                                                                                                                                                                                                                                                                                                                                                 'gene="TNF-R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . 633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2161
                                                                                                                                                                                                                                                                                                                                                                                                  .857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "TNF-R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ģ
                                                                                                                                                                                                             Score 424; DB 27;
Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                  604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RNA
                                                                                                                                                                                                                                                                                Ω
                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                  456
                                                                                                                                                                                                                                                                                  4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRI
                                                                                                                                                                                                                             Length 2161;
                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-JAN-1993
                                                                                                                                                                                              0
                                                                                                                                                                                            Gaps
   523
                                555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     its
of
                                                                                                                                                                                                0
```

```
밁
                                                                                                                                                                                 BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
                    밁
                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                    436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           556
                                                   344
                                                                                   376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                704
                                                                                                                 Local Similarity
mes 425; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14
                                             GATAGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGACACCGTGTGTGGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT 675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC 615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent: EP 0657536-A 1 14-JUN-1995;
YEDA RES & DEV (IL)
Other publication ZA 9407962 951121
Other publication JP 7194376 950801
Other publication AU 7574294 950504
Other publication CA 213872 950413.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG 735
                AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCIGT 769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCTGT 801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
unidentified.
unidentified
unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 2175)
Wallach,D., Brackebusch,C., Varfolomeev,E. and Batkin,M.
Proteases capable of shedding the soluble TNF-receptor and TNF-R
derived peptides and antibodies against the proteases inhibiting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g2299022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1 from Patent EP0657536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the shedding
                                                                                                                                                                                                  474
                                                                                                                40.4%;
larity 99.8%;
Conservative
                                                                                                                                                                                                                           /note="unnamed protein product"
/codon_start=1
/codon_start=1
/db_xref="piD:e305402"
/db_xref="piD:e305402"
/db_xref="piD:e305402"
/db_xref="piD:e305402"
/db_xref="piD:e305402"
/db_xref="piD:e305402"
/db_xref="piD:e30502"
/translation="MCLSTVDDLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
PQKYIHPQNNSICCTCHKGTYLYNDCPGPGQOTDCRECESGSETASENHIRHCLSC
SKCRKEMGOVEISSCTYDDTDTVGCRKNGVRHYWSENLFQCFNCELLNGTYVLLPLVI
FRGLCLLSLLFIGLMYXYQRWKSKLYSIYCGKSTPEKEGLEGTTTKLLNPSES9T
PGFTPTLGFSPVPSSTTTSSSTYTFGDCPFAAPAREVAPPYGADPILATALASDPI
PNPLOKWEDSAHKPQSLDTDDDATLYAVVENVPPLRWKETVRLGCLSDHEIDRLELON
GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPPA
                                                                                                                                                                                              PSLLR"
a 641
                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="unidentified"
/db_xref="taxon:32644"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2175
                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                đđ
                                                                                                                Score 424; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                              604 g
                                                                                                                                                                                                456 t
                                                                                                                                              Length 2175;
                                                                                                                Indels
                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             703
                  495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              763
                                                                                                                0
```

```
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
LOCUS
                                                                        Ş
                                                                                                                                                       밁
                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
 밁
                     δÃ
                                               В
                                                                                                   밁
                                                                                                                            Ş
                                                                                                                                                                                                          용
                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                            片
                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                    Query Match 40.4%;
Best Local Similarity 99.8%;
Matches 425; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     496
 676
                         584
                                                                            524
                                                                                                                                464
                                                                                                                                                        496
                                                                                                                                                                                  404
                                                                                                                                                                                                           436
                                                                                                                                                                                                                                    344 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC 403
                                                                                                                                                                                                                                                   376 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTTGCTGTACC 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTGT 769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAACAGAACACCGTGTGCACCTGCCATGCAGGTTTCTTAAGAGAAAACGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                     CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                      AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                           TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 555
                                                                                                                                                                                               AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 495
                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 2175)
Wallach,D., Brakebusch,C., Varfolomes
Molecules influencing the shedding of
preparation and their use
preparation and their use
Patent: US 565859-A 1 09-SEP-1997;
LOCATION/Qualifiers
1 .2175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTGT 801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGACACCGTGTGTGGCTGCAGGAAGCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                           AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                             TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                  AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
164751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g2481645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            164751
                                                                                                                                                                                                                                                                                                                                                       474
                                                                                                                                                                                                                                                                                                                                                     œ
                                                                                                                                                                                                                                                                                                                                                  /organism="unknown"
641 c 604 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ģ
                                                                                                                                                                                                                                                                                    Score 424; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US 5665859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                  Varfolomeev, E. shedding of the
                                                                                                                                                                                                                                                                                                                                                       456
                                                                                                                                                                                                                                                                                                                                                                                                                                 O
H
                                                                                                                                                                                                                                                                                      ۲.
                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                 and Batkin, M.
TNF receptor,
                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                               2175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-SEP-1997
                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               675
                                                 675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               463
                        643
                                                                           583
                                                                                                   615
                                                                                                                             523
                                                                                                                                                                                463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    555
```

THIS PAGE BLANK (USPTO)

Database:	Post-processing:	Searched:	Nmatch STD:	Scoring table:	Title: Description: Perfect Score: N.A. Sequence: Comp:	Run on: Tabular output no	Release 3 Copyright D	
n-geneseq30 l:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7 8:part8 9:part9 10:part10 11:part11 12:part12 13:part13 14:part14 15:part15 16:part16 17:part17 18:part18 19:part19 20:part20 21:part21 22:part22 23:part23 24:part24 25:part25 26:part26 27:part27 28:part28 29:part29 30:part30 31:part31 32:part32 33:part33	Minimum Match 08 Listing first 45 summaries	159651 seqs, 57698962 bases x 2	Dbase 0; Query 0	TABLE default Gap 6	>US-08-804-166-1 (1-1049) from US08804166.seq 1049 1 TCCACATGGCTACAGGTAAGTTATTATCACAAATCTTAAG 1049 AGGTGTACCGATGTCCATTCAATAATAGTGTTTAGAATTC	un n.a n.a. database search, using smith-Waterman algorithm Wed May 6 12:55:12 1998; MasPar time 137.48 Seconds 880.491 Million cell updates/sec output not generated.	0.5AA John F. Collins, Biocomputing Researd (c) 1997 University of Edinburgh, U.Estribution rights by Oxford Molecular Ltd	

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Statistics:

Mean 9.090;

Variance 5.026;

scale 1.809

#### SUMMARIES

Result	Score	Query Match	Length	BB	Ħ	Description	Pred. No.
ב	424	40.4	808	4	Q24441	Encodes truncated TNF	2.42e-296
2	424	40.4	1334	H	Q06282	Plasmid Tumour Necros	2.42e-296
ω	424	40.4	1368	œ	Q49932	Lambda-derived TNF-R	2.42e-296
4	424	40.4	2062	4	Q24440	Encodes TNF-alpha 55k	2.42e-296
5	424	40.4	2062	ω	Q20973		2.42e-296
σ	424	40.4	2088	N	Q10883	н	2.42e-296
7	424	40.4	2111	N	Q10955	Encodes human 55kD TN	2.42e-296
æ	424	40.4	2141	H	Q06285	Human Tumour Necrosis	2.42e-296
9	424	40.4	2175	15	Q90513	p55 TNF-R gene.	2.42e-296
10	424	40.4	6889	18	T15931	DHFR/intron (WTrasSD)	2.42e-296
11	422	40.2	2170	9	Q50870	p55 Tumour necrosis f	8.37e-295
12	422	40.2	2176	N	Q12215	Type I INF receptor.	8.37e-295
13	381	36.3	504	۵	Q24445	Encodes truncated TNF	2.76e-263
14	302	28.8	474	4	024442	Encodes truncated TNF	8.62e-203
15	300	28.6	2771	31	T76770	Rat Fabpl gut-specifi	2.90e-201

В

129 gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc 188

44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
80 79	101	103	132	146	150	164	166	169	176	206	230	251	251	255	258	258	259	259	259	259	259	259	259	259	259	259	291	298
7.6 7.5																			•			•						
360 1 267																												
11 Q65373 3 N50521		•							•					4 024444														33 T62826
ish gonadotropic equence encoding	Sequence encoding fis	ish gonadotropic	-	Gene encoding equine	Equine alpha subunit	Bovine alpha subunit	Ovine FSH alpha subun	Encodes truncated INF	Porcine alpha subunit	Sequence of gene for	Rat Tumour Necrosis F	gonado	Gonadotropin alpha su	Encodes truncated INF	Dimeric glycoprotein	ered hu	chain	cha	chain	chain	chain		chain	chain	chain	Single chain gonadotr	rowth	
2.70e-37 1.36e-36	.09e	.12e-	.45e-	.02e-	. 39e-	.75e-	.66e-	.28e-	.95e-	.00e	.62e-	.69e-	.69e-	.24e-	.76e-	.76e-	. 80e-	.80e-	.80e-	. 80e-	.80e-	e-	.80e-	. 80e-	.80e-	.80e-	.12e-	3e-

## ALIGNMENTS

```
RESULT
AC Q2
Query Match 40.4%;
Best Local Similarity 99.8%;
Matches 425; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q24441 standard; DNA; 608 BP.
Q24441;
Q24441;
O5-NOV-1992 (first entry)
Encodes truncated TNF-alpha 55kD receptor (197 amino acids).
tumour necrosis factor alpha; extracellular binding domain;
treatment; pulmonary diseases; septic shock; HIV infection; AIDS;
malaria; viral meningits; graft versus host disease;
autoimmune disease; rheumatoid arthritis.
                                                                                                                                                                                                                                                                                                P-PSDB; R24080.

New polypeptide capable of binding human TNF alpha - comprises first three cysteine-rich subdomains of TNF alpha receptor for treating autoimmune disease, septic shock, HIV etc.

Example; Fig 7; 43pp; English.

This sequence encodes the designed TNF-alpha 55kD receptor for derivative, as present in pTNFRecd. This was produced as described in 224441. This derivative lacks the 81 carboxyl terminal residues of the cytoplasmic domain. The derivative could be used in the regulation of TNF-alpha mediated responses by binding and sequestering human TNF-alpha e.g. in the treatment of pulmonary diseases, septic shock, HIV infection, malaria, viral meningitis, graft versus host disease and autoimmune diseases, esp. rheumatoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
W09207076-A.
30-ARR-1992.
18-OCT-1991; GB-022648.
18-OCT-1990; GB-022648.
(CHAR-) CHARING CROSS SUNLEY RES CENT.
BIEDRIAN FELDMANN M, GTAY PW, TUTNER MJC;
PSTEEL 52-166/20.
                                                                                                                                                                                        See also Q24440-51, R24000, R24080-84, R27585, Q29236-8
Sequence 608 BP; 148 A; 159 C; 165 G; 136
                                                                                                                                                                                                                                                                                  arthritis.
Score 424; DB 4; Le
Pred. No. 2.42e-296;
0; Mismatches 1;
                                                                                         Length 608
         Indels
                                                                                                                                                                                        ₩
**
         0
    Gaps
         0
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                              DNA encoding TNF binding protein and TNF- receptor - used in tumour treatment and to understand mechanismsm to TNF action Disclosure; Fig 1(1-3); 51pp; German.

CE pTNF-BP15 is one of 30 positives clones in a screened cDNA library from induced TNF-induced fibrosarcoma cells. A TNF-BP had been isolated from the urine of patients with uraemia and probes/primers were constructed from the determined amino acid sequence.

To produce a vector expressing a soluble form of TNF-binding protein, this plasmid was cut with XmmI, amplified by PCR and the amplified DNA cut with BamHI and EcoRI.

The resulting 0.75 kb DNA fragment was inserted into pT7/T3 alpha-19 (BRL) cut with the same enzymes to recover pTNF-BP. This was cut with BamHI and EcoRI, and the recovered fragment inserted into pDF2/CBAD-CWT1 (OD6283) to give the required plasmid pADTNF-BP.

See also Q06283 to give the required plasmid pADTNF-BP.

Sequence 1334 BP; 299 A; 409 C; 342 G; 284 T;
   Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                                  (BOEH ) BOEHRINGER INGELHEIMINT.
Hauptmann R, Himmler A, Maurer-Fogy I, Stratowa WPI; 90-321987/43.
                                                                                                                                                                                                                                                                                      24-OCT-1990.
06-APR-1990; 106624.
21-APR-1989; DE-913101.
21-JUN-1989; DE-920282.
                                                                                                                                                                                                                                                                                                                                                                                              Tumour necrosis factor pTNF-BP15; ss. Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                           Q06282 standard; DNA; 1334
Q06282;
29-JAN-1991 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                   Plasmid Tumour Necrosis Factor-Binding | Tumour necrosis factor binding protein;
                                                                                                                                                                                                                                            P-PSDB; R07449
                                                                                                                                                                                                                                                                                                                                     /product=TNF-BP
EP-393438-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTGT 769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ttocagtgottcaattgcagcototgcotoaatgggacogtgcacototcotgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tcctgt 554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tgcagggagtgtgagageggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
    l Similarity
425; Conser
  40.4%;
llarity 99.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
213..1325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA; 1334 BP.
  Score 424; DB 1; L
Pred. No. 2.42e-296;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                    Protein 15 cDNA insert.
; TNF-BP; TNF-receptor;
                       Length 1334;
                                                                                                                                                                                                                                                              ü
  Indels
 0
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              403
 0
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             용
        New fusion protein tumour necrosis factor and human interleukin-1 receptor - useful in therapy, diagnosis and assays of e.g. rheumatoid arthritis, diabetes, cerebral malaria, sepsis, etc. Disclosure; Page 57-59; 85pp; English.
The sequences given in Q49931-32 encode human tumour necrosis factor receptor (TNF-R) and the sequences in Q49933-34 encode human interleukin-1 receptor (TL-IR). These sequences were used in the production of a fusion protein which conformed to one of the formulae:
TNF-R-linker-TNF-R-linker-IL-1R
```

```
/product= hi
/product= hi
sig_peptide
/*tag= b
                                                               mat_peptide 121..136.

/*tag= c

W0931977-A.

14-OCT-1993.

26-MAR-1993; U02938.

30-MAR-1992; US-860710.
                Smith WPI; 9
                                                                                                                                                                                                                                                                                                                  Lambda-derived TNF-R cDNA.

Human; tumour necrosis factor receptor; TNF-R; interleukin-1 receptor; IL-1R; fusion protein; linker, TNR; IL-1; cachexia; cerebral malaria; rheumatoid arthritis; dilabetes; multiple sclerosis; septic shock; pulmonary fibrosis; silicosis; allografe; xenografe; rejection; graft verses host disease; sepsis; inflammation; allergy; autoimmune dysfunction; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TT 3
Q49932 standard; cDNA to mRNA; 1368
Q49932;
P-PSDB; R42059.
                                                                                                                                                                                                                                                                                      Lambda-gt10-7-ctnfbp.
                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-APR-1994 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                764
                93-336592/42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               aaacagaacaccgtgtgcacctgccatgcaggtttcttttctaagagaaaacgagtgtgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGACACCGTGTGGGTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tcctgt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tgcagggagtgtgagagcggctccttcaccgcttcagaaaacccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc
                             CA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                  IMMUNEX CORP.
                                                                                                                                                                                                                   hTNF-R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                758
                                                                                                                                                             121..1363
                                                                                                                                                                                                                                                     1..1366
                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                ..120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       703
```

```
RESULT CO. AC CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The linker may comprise 5-100 amino acids selected from Gly, Asp, Ser, Thr and Ala. These linkers separate the individual moeities by such a distance that each component of the fusion protien is capable of folding into the secondary or tertiary structure required for its biological activity. These fusion proteins may be used in therapy, diagnosis and assays for conditions mediated by TNF or IL-1, particularly in conditions in which both TNF and IL-1 play a causitive role. They may be used to treat cachexia, rheumatoid arthritis, diabetes, multiple sclerosis, pulmonary fibrosis and silicosis, cerebral malaria, allograft and xenograft rejection in graft verses host disease, sepsis, septic shock, inflammation, allergies and autoimmune dysfunctions.

292 A: 424 C: 376 G: 276 T:
                      /*tag= a
/product= hu
mat_peptide
/*tag= "3"
mat_peptide
/*tag= c
                                                                                                                                                                                                                                                                                   Q24440 standard; DNA; 2062 BP.
Q24440;
Q24440;
O5-NOV-1992 (first entry)
Encodes TNF-alpha 55kD receptor.
tumour necrosis factor alpha; extracellular binding domain;
treatment; pulmonary diseases; septic shock; HIV infection;
malaria; viral meningits; graft versus host disease;
                                                                                                                                                                                                                                             autoimmune di
Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IL-1R-linker-TNF-R-linker-TNF-R
TNF-R-linker-TNF-R
The linker-may comprise 5-100 an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tgcagggagtgtgagagcggctccttcacccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             amacagaacaccgtgtgcacctgccatgcaggtttcttttctaagagaaaacgagtgtgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tcctgt 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAACAGAACACCGTGTGCACCTGCCATGCAGGTTTCTTCTAAGAGAAAACGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         l Similarity
425; Conser
c
seq:"TGG",
                                                                                                                                                 human
                                                                                                                                                                                                                                                                    disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40.4%;
larity 99.8%;
Conservative
                                                                                                                                            TNF-alpha
                                                                                                                                                                                            Location/Qualifiers 156..1517
                                                  1265..1267
                                                                                                                       1265..1267
                                                                                                                                                                                                                                                                    rheumatoid arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 424; DB 8; L
Pred. No. 2.42e-296;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1368;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
당
                                                                        Š
                                                                                                                   밁
                                                                                                                                                    δÃ
                                                                                                                                                                                              밁
                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                     ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      first three cysteine-rich subdomains of TNF alpha receptor for treating autoimmune disease, septic shock, HIV etc.

Claim 4; Fig 1; 43pp; English.

Claim 5; Fig 1; 43pp; English.

Claim 4; Fig 1; 43pp; English.

Claim 5; Fig 1; 43pp; English.

Claim 4; Fig 1; 43pp; English.

Claim 5; Fig 1; 43pp; English.

Claim 5; Fig 1; 43pp; English.

Claim 5; Fig 1; 43pp; English.

Claim 6; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /codon= Seq"AAG", aa:Leu
mat_petide 1433..1435
/*tag= e
/codon= Seq:"GAC", aa:Asn
sig_peptide 156..274
/*tag= f
W09207076-A.
30-APR-1992.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-OCT-1991; G01826.
18-OCT-1990; GB-022648.
(CHAR-) CHARING CROSS SUN
Brennan FM, Feldmann M, C
WPI; 92-167156/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      into monk
See also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P-PSDB; R24000
New polypeptide capable
first three cysteine-ric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mat_peptide
/*tag= d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
764
                                       695
                                                                            704
                                                                                                                 635
                                                                                                                                                        644
                                                                                                                                                                                                575
                                                                                                                                                                                                                                     584
                                                                                                                                                                                                                                                                          515
                                                                                                                                                                                                                                                                                                                 524
                                                                                                                                                                                                                                                                                                                                                      455
                                                                                                                                                                                                                                                                                                                                                                                              464
                                                                                                                                                                                                                                                                                                                                                                                                                                     395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  monkey COS-7 cells.
also Q24440-51, R24000, R24080-84, 1
ence 2062 BP; 429 A; 618 C;
                                                                          ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                   agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc
TCCTGT 769
                                       tcctgt 700
                                                                                                                                                                                                                                                                                                                                                                                              TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                  tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       l Similarity
425; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1258..1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        40.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUNLEY RES CENT.
M, Gray PW, Turner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of binding human TNF alpha - comprich subdomains of TNF alpha receptor ase, septic shock, HIV etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 424; DB 4; L
Pred. No. 2.42e-296;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , R27585,
C; 572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , Q29236-8
2 G; 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 2062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clones
                                                                                                                                                                                                                                                                                                                                                                                                                                     454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           403
                                                                              763
                                                                                                                 694
                                                                                                                                                                                              634
                                                                                                                                                                                                                                     643
                                                                                                                                                                                                                                                                          574
                                                                                                                                                                                                                                                                                                                 583
                                                                                                                                                                                                                                                                                                                                                    514
                                                                                                                                                                                                                                                                                                                                                                                              523
                                                                                                                                                        703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
δõ
                                                                                                                       δÔ
                                                                                                                                                                         Ş
                                                                                                                                                                                                      밁
     밁
                       Ş
                                                   밁
                                                                                                    밁
                                                                                                                                                밁
                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                               New tumour necrosis factor alpha binding protein and polypeptide - useful in treating cachexia, sepsis and auto immune diseases e.g. rheumatoid arthritis

plisclosure; Fig 1; 25pp; English.

The sequence is that of DNA encoding tumour necrosis factor alpha binding protein which was obtd. from a human placental cDNA library in lambda gtil using a probe (Q20974). The DNA also encodes the extracellular domain of human TNF alpha receptor and as such it is useful for treating diseases where TNF alpha is involved as a causative agent, e.g. cachexia, sepsis and autoimmune diseases, specifically rheumatoid arthritis. See also Q20974.

Sequence 2062 BP; 429 A; 616 C; 573 G; 444 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11-MAY-1992 (first entry)
TWF-alpha binding protein gene.
Tumour necrosis factor alpha; autoimmune diseases;
extracellular domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q20973 standard;
Q20973;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-JUN-1990; 013410.
15-JUN-1990; GB-013410.
(CHARR) CHARING CROSS SUNLE.
Feldman M, Gray P, Turner M, Brennan
WPI; 92-043613/06.
P-PSDB; R20787.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "encodes the extracellular domain TNF alpha receptor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= a
/note= "homologous to probe
/note= 242..751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                           644
                                                                            584
                                                                                                     515
                                                                                                                              524
                                                                                                                                                      455
                                                                                                                                                                               464
                                                                                                                                                                                                        395
                                                                                                                                                                                                                                 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1g_peptide
                                                                         CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                       ttocagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                            tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                                                                             aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                                                                                                                                             gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc
AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                         agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttttttgcacagtggac
                                                                                                                                                                                                                              AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                               GATAGTGTGTCCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens.
                                                                                                                                                                                                                                                                                                                                 ch 40.4%;
l Similarity 99.8%;
425; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     473..532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        155..274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers 155..1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ВP
                                                                                                                                                                                                                                                                                                                                 Score 424; DB 3; Le
Pred. No. 2.42e-296;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of human
                                                                                                                                                                                                                                                                                                                                                         Length 2062;
                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cachectin;
                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                 Gaps
                                                634
                                                                                                  574
                                                                                                                                                   514
                                                                                                                                                                                                     454
                                                                                                                                                                                                                              463
                                                                                                                                                                                                                                                                                403
                                                                           643
                                                                                                                                                                             523
                                                                                                                                                                                                                                                                                                                                 0
```

```
RESULTATION OF A PART OF A
                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                     δ
                                                                                           밁
                                                                                                                                 δÃ
                                                                                                                                                                                     밁
                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
  유
                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24-JAN-1991.

16-JUL-1990; 05-8976.

18-JUL-1989; US-381080.

11-DEC-1989; US-450329.

07-FEB-1990; US-479661.

(SYNE-) SYNERGEN INC.

WPI; 91-073847/11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tumour necrosis factor inhibitor - for suppression of TNF-alpha and -beta, useful as therapeutic agent.

Disclosure; Fig 21; 142pp; English.

The sequence encodes the entire 30 kD TNF inhibitor. The clone from which the sequence was obtd. was isolated from a cDNA library prepd. from RNA form U937 cells treated with PNA/PHA. The whole gene can be inserted into expression vectors for prepn. of TNF inhibitor for use in the treatment of inflammatory and degenerative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13-MAY-1991 (first entry)
30kD TNF inhibitor precurs
Tumour necrosis factor; in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q10883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     See also Q10878,
Sequence 2088 P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag= a
AU9058976-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P-PSDB; R10986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           695
                                                                                                                                                                                                                                      584
                                                                                                                                                                                                                                                                                                                                                                                    469
                                                                                                                                                                                                                                                                                                                                                                                                                                 464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          344 GATAGTGTGTCCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC
                                                                                                                                                                                                                                 aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc
                                                                     ttocagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                 tycagygagtytgagagcygctccttcaccycttcagaaaaccacctcagacactycctc
tcctgt
                                               TCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tcctgt
                                                                                                                                           TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ch 40.4%;
l Similarity 99.8%;
425; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     , Q10884 and Q10907.
BP; 439 A; 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tor precursor gene in lambda-gt10-7ctnfbp.
factor; inhibitor; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers 171..1536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 424; DB 2; L
Pred. No. 2.42e-296;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 2088;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ၈
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                           708
                                                                                                                                                                                                                                      643
                                                                                                                                                                                                                                                                                                                                                                                                                                   523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          763
                                               763
                                                                                                                                           703
```

S

764

standard;

CDNA;

ВP

```
RESULT 7

RESULT 7

RESULT 7

DO 010955;

AC 010955;

DT 24-MAY-1991

Encodes Incodes 
                                                                  Ş
                                                                                                                        밁
                                                                                                                                                             δõ
                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-MAR-1991.
31-AUG-1990; 116707.
12-SEP-1989; CH-003319.
08-MAR-1990; CH-000746.
20-APR-1990; CH-001347.
(HOFF ) HOFFMANN-LA ROCH
Brockhaus M, Dembic Z, G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 4; Fig 1; 26pp; German.

Partial amino acid sequences were determined for the 55 and 75kD

TNF-BPs (see R11072-R11081) and oligonucleotide primers were
synthesised based on these partial sequences. The primers were used
to produce a cDNA fragment for use as aprobe to screen a human
placental cDNA bank constructed in lambda gill. Positive clones were
identifed and sequenced. DNA constructs comprising the TNF-BP coding
sequence may also contain a fragment encoding a human Ig domain.

Recombinant constructs are used to transform cells to confer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-MAY-1991 (first entry)
Encodes human 55kD TNF-binding proteins:
Tumour Necrosis Factor; binding proteins; sautoimmune glomerulonephritis; lymphokine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     improved TNF-binding properties.
See also Q10956.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P-PSDB; R11082. Insoluble tumour necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Schlaeger EJ;
WPI; 91-081851/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /product= 55kD
EP-417563-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            encoding them,
                                667
                                                                                                                        607
                                                                                                                                                                       584
                                                                                                                                                                                                                 547
                                                                                                                                                                                                                                                                     524
                                                                                                                                                                                                                                                                                                               487
                                                                                                                                                                                                                                                                                                                                                             464
                                                                                                                                                                                                                                                                                                                                                                                                            427
                                                                                                                                                                                                                                                                                                                                                                                                                                                           404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                             cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                        agctgctccaaatgccgaaaggaaatggggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                    tgcagggagtgtgagagcggctccttcaccgcttcagaaaacccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATAGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc
                                                                                                                                                                     CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                           TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    l Similarity
425; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40.4%;
llarity 99.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TNF-BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       274..1551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ROCHE
2, Gen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gentz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 445 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         s factor binding pharmaceutical p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 424; DB 2; I
Pred. No. 2.42e-296;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ×,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lesslauer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g proteins - and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        septic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ٤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               588 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lotscher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ή
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                       486
                                                                                                                                                                                                                                                                                                                                                                                                                                                         463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   366
                           726
                                                                         703
                                                                                                                      666
                                                                                                                                                                                                                 606
                                                                                                                                                                                                                                                                583
                                                                                                                                                                                                                                                                                                                                                        523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
RESULT
ACCORDANCE
RESULT
ACCOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                   밁
                                                                     δÃ
                                                                                                                   밁
                                                                                                                                                  δÃ
                                                                                                                                                                                              밁
                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                           묽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TIT 8
Q06285 stand
Q06285;
29-JAN-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /*tag= a
/label=huTNF-R
EP-393438-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LambdaTNF-R2 encodes the complete human TNF-R2 and was used construct a plasmid (pADTNF-R) expressing the product the seas pADTNF-RP (see 006282).

See also Q06282-Q06285.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA encoding TNF binding protein and tumour treatment and to understand me Disclosure; Fig 91(1-2); 51pp; German raTNF-R8 (Q06284) was used to screen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24-OCT-1990.

06-APR-1990; 106624.

06-APR-1999; DE-913101.

21-JUN-1989; DE-920282.

(BOEH ) BOEHRINGER INGELHEIMINT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-GAN-1991 (first entry)
Human Tumour Necrosis Factor-Receptor cDNA insert.
Tumour necrosis factor binding protein; TNF-BP; TN
lambdaTNF-R2; raTNF-R8; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hauptmann R, Himmler WPI; 90-321987/43. P-PSDB; R07451.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        764
                                                                                                                                                           644
                                                                                                                                                                                              633
                                                                                                                                                                                                                                        584
                                                                                                                                                                                                                                                                              573
                                                                                                                                                                                                                                                                                                                      524
                                                                                                                                                                                                                                                                                                                                                              513
                                                                                                                                                                                                                                                                                                                                                                                                      464
                                                                                                                                                                                                                                                                                                                                                                                                                                           453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   704
                                   753
                                                                           704
                                                                                                                   693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     344 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC
764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7 tectgt 732
||||||
4 TCCTGT 769
                       tcctgt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                         cgggacaccgtgtgtgggtgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                                                    TCCTGT
                                                                           AMACAGAACACCGTGTGCACCTGCCATGCAGGTTTCTTTCTAAGAGAAAACGAGTGTGTC
                                                                                                                                                         TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                      CGGGACACCGTGTGCGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     l Similarity
425; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40.4%;
larity 99.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers 213..1577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Maurer-Fogy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Α;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 424; DB 1; L
Pred. No. 2.42e-296;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mechanismsm to I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stratowa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HS913T CDNA library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 2141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ဇ္
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TNF-receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       used in
action
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ដ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           way
                                                                                                                                                                                              692
                                                                                                                                                                                                                                      643
                                                                                                                                                                                                                                                                            632
                                                                                                                                                                                                                                                                                                                    583
                                                                                                                                                                                                                                                                                                                                                            572
                                                                                                                                                                                                                                                                                                                                                                                                      523
                                                                                                                                                                                                                                                                                                                                                                                                                                         512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     403
                                                                           763
                                                                                                                   752
                                                                                                                                                       703
```

```
δõ
                                                                                      당
                                                                                                          δ
                                                                                                                                                   밁
                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                          CC This sequence represents human p55 tumour necrosis factor (TNF-R) DNA.

CE Expression of this receptor is regulated by shedding of the extracellular receptor fragment. The p55 TNF-R can be shed in response to different cc inducing agents, e.g. phorbol myristate acetate (pMA), depending on cell type. The only region of the receptor whose structure affects the ctype. The only region of the receptor whose structure affects the shedding response is the spacer region (see R75012) in the extracellular cd domain. This region is located close to a site of cleavage of the complex of the encoded protein was used to create the chimeras between human p55 TNF-R and murine epidermal growth factor receptor (EGF-R) that are represented by R75007-11. This spacer region was cc subjected to deletion mutations (R75013-25) and substitutions cc (R75025-47). Of the spacer region, the most important residues are conformation of the protein adversely effect the receptor is independent of the conformation of the protein adversely effect the shedding process. The mutations shown in R75013-47 were introduced in order to create an inhibitor of a protease that is capable of cleaving the soluble TNR-R fragments of these inhibitors can be seen in cc most of the cell bound TNF-R. Fragments of these inhibitors can be seen in the used for enhancing TNF function.

Sequence 2175 BP; 474 A; 642 C; 603 G; 456 T;
                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= a
/product= p5
misc_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   p55; tumour necrosis factor receptor; TNF-R; human; murine; chimera; epidermal growth factor receptor; EGF-R; protease; inhibitor; phorbol myristate acetate; PMA; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antagonising deleterious effects of TNF. Disclosure; Fig 1; 40pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 95-194342/26.
P-PSDB; R75084.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                74-MAI-137.
11-CCT-1994; 075742.
12-CCT-1993; IL-107268.
(YEDA ) YEDA RES & DEV CO LTD.
(YEDA ) YEDA RES & DEV CO Varfolomeev E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "possible poly-A signal"
AU9475742-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q90513 standard; DNA; 2175
Q90513;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New protease capable of cleaving soluble tumour necrosis factor (TNF) receptor - from cell-bound TNF- receptor, useful for
                      556
                                                      464
                                                                                                                     404
                                                                                                                                                     436
                                                                                                                                                                                     344
                                                                                      496
                                                                                                                                                                                                                    376
                                                                                                                                                                                                                                                  y Match 40.4%;
Local Similarity 99.8%;
hes 425; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TNF-R gene.
                                                                                                                                                                              agctgctccamatgccgmamaggamatgggtcmggtggmgmtctcttcttgcmcmgtggmc
                                               gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgattttgctgtacc 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers 256..1623
                                                                                                                                                                                                                                                Score 424; DB 15;
Pred. No. 2.42e-296;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wallach
                                                                                                                                                                                                                                                                            Length 2175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ā
                                                                                                                                                                                                                                               0
                                                                                                                                                                                  403
                  615
                                                  523
                                                                               555
                                                                                                                                                                                                                                               0
```

```
밁
                                                 S
                                                                                밁
                                                                                                                Ş
                                                                                                                                                  밁
                                                                                                                                                                              Q
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ω¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                          improved process for the selection of recombinant host cells expressing high level of a desired product - uses eukaryotic host cells contg. a DNA construct comprising a selectable gene example 2; Page 36-42; 137pp; English.

Candicistronic vector (T15930) comprises a regulatory region derived from the cytomegalovirus immediate-early gene, a selectable dihydrofolate reductase gene positioned within an intron having a 5 wild-type ras splice donor site, a downstream sequence coding for an immunoadhesin, TnFr-IgG, capable of binding tumour necrosis factor, and a poly-A sequence. Transfection of CHO DHFR-cells and subsequent methotrexate amplification and growth of the cells in nutrient-rich medium gave TnFr-IgG in yields of 9.5 capable (15-fold higher compared to conventional vector amplified
                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TIT 10
T15931 standard; 1
T15931;
20-JUN-1996 (fir
                                                                                                                                                                                                                   1785
                                                                                                                                                                                                                                                                                                                                                                                                ug/ml
pools)
                                                                                                                                                    1845
                                                                                                                                                                                                                                                                 1725 gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc 1784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic. W09604391-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Crowley CW;
WPI; 96-129407/13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-JUL-1995; U09576.
05-AUG-1994; US-286740.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DHFR/Intron (WTrasSD)-TnFr-IgG dicistronic vector.

Recombinant host cell; dihydrofolate reductase; selectable marker;

DHFR; ras splice donor; dicistronic vector; gene expression;

immunoadhesin; TnFr-IgG; tumour necrosis factor; ds.
                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GETH ) GENENTECH
                                                                                                                    464
                                                                                                                                                                                   404
                                                                                                                                                                                                                                                  344 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCATTTGCTGTACC 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                524
                                                                                                                                                                                                                                                                                                                               Local
cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                     agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac 1964
                                                                                                                                 tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc 1904
                                                                                                                                                                                                  aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac 1844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tcctgt 801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                asacagaacaccgtgtgcacctgccatgcaggtttctttctaagagaaaacgagtgtgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ttccagttgcttcaattgcagcctctgcctcaatgggaccgttgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGACACCGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                  TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                h 40.4%;
Similarity 99.8%;
                                                                                                                                                                                                                                                                                                                                                                                    6889
                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                  BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA; 6889
                                                                                                                                                                                                                                                                                                                                                                                  1729
                                                                                                                                                                                                                                                                                                                                                                                  ۶
                                                                                                                                                                                                                                                                                                               Score 424; DB 18;
Pred. No. 2.42e-296;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                  1826 C;
                                                                                                                                                                                                                                                                                                                                                                                1681 G;
                                                                                                                                                                                                                                                                                                                 1;
                                                                                                                                                                                                                                                                                                                                                Length 6889;
                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                  H
                                                                                                                  523
                                                                                                                                                                                 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               643
```

Ş 밁 Ş 밁 Ş 밁 Ş

763 795 703 735 643

```
Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-NOV-1993.

10-NOV-1993; 106981.

29-AAR-1992; IL-101769.

(YEDA) YEDA RES & DEV CC

(YEDA) WALLACH D. WALLA
                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                disease, septic shock, etc.

Claim 2; Figure 1; 17pp; English.

Modification of the tumour necrosis factor receptor by mutation or Modification of the tumour necrosis factor receptor by mutation or deletion modulates signal transduction and/or cleavage effected by the receptor. This modulation of activity can also be achieved using effector proteins which interact with the TNF receptor. Molecules which interact with the TNF receptor or the effector proteins can be used to treat or prevent diseases associated with TNF activity e.g. autoimmune disease; rheumatoid arthritis; graft rejection; graft vs. host disease or septic shock. They can also be used to treat overdoses of exogenous TNF.

Sequence 2170 BP; 474 A; 657 C; 584 G; 455 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= a
/product=
EP-568925-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LT 11
Q50870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                p55 Tumour necrosis factor receptor coding sequence.
TNF; tumour necrosis factor; receptor; disease; autoimmunity; rheumatoid arthritis; graft rejection; graft vs. host; septic effector protein; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Modulating activity of tumour necrosis factor receptor - using peptide(s), antibodies, etc. which interact with critical recof receptor or effector protein, for controlling auto-immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q50870;
13-MAY-1994 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P-PSDB; R42197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             584
                                                                                                                                                                                                                                                            376
   616
                                   524
                                                                                               464
                                                                                                                                496
                                                                                                                                                                404
                                                                                                                                                                                              436
                                                                                                                                                                                                                              344
                                                                                                                                                                                                                                                                                          Local Similarity
nes 424; Conser
                                                                                                                                                                                                                            TCCTGT 769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                  agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                               tcctgt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
 cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                   standard; DNA; 2170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    p55 Tumour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2150
                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
256..1623
                                                                                                                                                                                                                                                                                                           40.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <del>,</del> 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BP.
                                                                                                                                                                                                                                                                                        Score 422; DB 9; I
Pred. No. 8.37e-295;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   factor receptor
                                                                                                                                                                                                                                                                                                                      Length 2170;
                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                septic shock;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     using
                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2084
                                                                                               523
                                                                                                                                                              463
                                                                                                                                                                                            495
                                                                                                                                                                                                                              403
                                                                                                                                                                                                                                                          435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             643
     675
                                 583
                                                               615
                                                                                                                                555
                                                                                                                                                                                                                                                                                            0
   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
repeat_unit 757..858

/*tag= 1
/number= 4
polyA_signal 2145..2150
/*tag= m
EP-433900-A.
26-JUN-1991.
13-DEC-1989; IL-092697.
13-DEC-1989; IL-092697.
12-JUL-1990; IL-095064.
(YEDA) YEDA RES & DEV CO LTD.
Wallach D, Nophar Y, Kemper O, E
Maderka D;
                                                                                                                                                                                                                                                          repeat_unit
/*tag= j
/number= 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= d
/label= soluble_dr
/label= may be 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note- "may
longer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q12215
Q12215;
                                                                                                                                                                                                                                                                                                                               /*tag= h
/*tag= h
/label= transmembrane_domain
385..504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /product- type sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Type I TNF receptor.
Tumour Necrosis Factor; TNF; binding protein; TBP-I;
                                                                                                                                                                                                                            repeat_unit
/*tag= k
                                                                                                                                                                                                                                                                                                                        repeat_unit
/*tag= i
                                                                                                                                                                                                                                                                                                                                                                                        misc_RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mat_peptide
/*tag= c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 terminator
                                                                                                                                                                                                          /number=
                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= g
/note= "TBP-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                       note- "TBP-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag= e
/note= "TBP-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag= a
/note= "in-frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12-SEP-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           676
                                                                                                                                                                                                                                                                                                           'number- 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ttccagtgcttcaattgcagcctctgcctcaatgcgaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTGT 769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tcctgt 801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard; DNA; 2176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     derived sequence" 583..627
                                                                                                                                                                                                                                                                                                                                                                                        derived sequence"
889..957
                                                                                                                                                                                                                                                                                                                                                                                                                                      derived sequence"
850..858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      376..414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    319..1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers 244..246
                                                                                                                                                                                                                                             634..756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    319..864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TNF receptor 256..318
                                                                                                                                                                                                                                                                                            505..633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   termination codon<sup>®</sup> 256..1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     codons shorter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВP
                  Engelmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         few
                  Ξ
                    Brakebusch
```

Š 밁 δÃ 밁 Ş 밁 Ş 용

밁

```
RESULT
RESULT
OCCUPANT
OCCUPAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SCCCCCCC PTT DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ϋ́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Recombinant tumour necrosis factor binding protein I - prepd. by transfecting eukaryotic cells with vector contg. deoxyribonucle I acid encoding human type I TNF receptor or soluble domain Disclosure; Fig (1D); 30pp; English.

C The Tumour Necrosis Factor Binding Protein I is the soluble for type I TNF receptor and constitutes a fragment of the cell surf. C form of this receptor, corresp. to its extracellular domain. There is no characteristic poly(A) addition signal near the 3' of the cDNA. The sequence ACTAAA (tag m) may serve as an calternative to this signal, but with low efficiency.

Sequence 2176 BP; 475 A; 644 C; 602 G; 455 T;
                                                                                              18-OCT-1991; GO1826.

18-OCT-1990; GB-022648.

(CHAR-) CHARING CROSS SUBTENDENT FM, FELGMANN M,

WPI; 92-167156/20.
P-PSDB: 724084.

New polypeptide capable of binding human TNF alpha -
first three cysteine-rich subdomains of TNF alpha rec
first three cysteine-rich subdomains of the alpha rec
                                                                                                                                                                                                                                                                             Encodes truncated TNF-alpha 55kD receptor (165 amino acids). tumour necrosis factor alpha; extracellular binding domain; treatment; pulmonary diseases; septic shock; HIV infection; malaria; viral meningits; graft versus host disease; autoimmune disease; rheumatoid arthritis.
                                                                                                                                                                                                                                                             autoimmune disease;
Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                   Q24445;
05-NOV-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                            Q24445 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 91-186774/26
P-PSDB; R12550.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tcctgt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tycayyyaytytyayaycyyctccttcaccycttcayaaaaaccacctcayacactycctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               40.2%;
Similarity 99.5%;
424; Conserver
                                                                                                                                                                                                                                                                                                                                                                                                   (first
                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA;
                                                                                                                                                                                                                                                                                                                                                                                                   entry)
                                                                                                                      Z,
                                                                                                                   SUNLEY
                                                                                                                                                                                                                                                                                                                                                                                                                                              ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
Pred.
                                                                                                                   PW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                      Turner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                422; DB 2; L
No. 8.37e-295;
                                                                                                                      M.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                              receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                            ceptor for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            soluble form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cell surface
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               prepd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            prepd. by
ibonucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ψ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
Example; Fig 11: 43pp; English.

Chis sequence encodes the designed TNF-alpha 55kD receptor this sequence encodes the designed to the sequence color of a pcr using cloning of the BglII/HindIII digested product of a pcr using cloning of the BglII/HindIII digested product of a pcr using cloning of the BglII/HindIII of the translation code a termination coden after amino acid 167, to yield pdeltaIV. This derivative lacks the membrane proximal 4th subdomain, yet creating the ability to bind TNF-alpha with high affinity creating the ability to bind TNF-alpha with high affinity creating the ability to bind TNF-alpha with high affinity creating human TNF-alpha mediated responses by binding and seguestering human TNF-alpha e.g. in the treatment of pulmonary creating human TNF-alpha e.g. in the treatment of pulmonary creating the shock, HIV infection, malaria, viral meningitis, creating the shock, HIV infection, malaria, viral meningitis, creating the shock, HIV infection, malaria, viral meningitis, creating the shock of the sease and autoimmune diseases, sep. rheumatoid creating the second creatin
   CC CC SECRET SEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 38
                                                                                                                                                              LB-OCT-1990; GB-022648.
(CHAR-) CHARING CROSS SU
Brennan FM, Feldmann M, WPI; 92-167156/20.
P-PSDB; R24081.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JLT 14
Q24442 standard;
Q24442;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-NOV-1992 (first entry)
05-NOV-1992 (first entry)
Encodes truncated TNF-alpha 55kD receptor (155 amino acids).
Encodes truncated TNF-alpha; extracellular binding domain;
truncated truncatery diseases; septic shock; HIV infection;
malaria; viral meningitis; graft versus host disease;
autoimmune disease; rheumatoid arthritis.
                                                                                                                                                                                                                                                                                        30-APR-1992.
18-OCT-1991;
18-OCT-1990;
(CHAR-) CHARI
New polypeptide capable of binding human TNF alpha - comprifirst three cysteine-rich subdomains of TNF alpha receptor treating autoimmune disease, septic shock, HIV etc.

Example; Fig 8; 43pp; Engilish.

This sequence encodes the designed TNF-alpha 55kD receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aaacagaacaccgtgtgcacctg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cgggacaccgtgtgtgggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           aagtgccacaaaggaacctacttgtacaatgactgtccaggcccgggggaggatacggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAACAGAACACCGTGTGCACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             agctgctccaaatgccgaaaggaaatggggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ch 36.3%;
| Similarity 99.7%;
| 382; Conservative
                                                                                                                                                                                                                                                   SUNLEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 381; DB 4; Lo
Pred. No. 2.76e-263;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             503
                                                                                                                                                                                                                                                   PW,
                                                                                                                                                                                                                                                   CENT.
                                                                                                                                                                                                                                                       MJC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                           T76770;
                                                                                                                                                                                                                                                                         Rat Fabpl gut specific promoter and human growth hormone exon 1.
Human GDP-L-fucose:beta-D-galactoside-2-alpha-L-fucosyltransferase;
GDP-L-fucose:beta-D-N-acetylglucosamide 3/4-alpha-L-fucosyltransferase;
alpha 1,2 F7; alpha 1,3/4 FT; tissue-specific promoter;
rat liver fatty acid binding protein; transgene; transgenic mouse;
animal model; intestinal adhesion; Helicobacter pylori infection;
stomach; small intestinal adhesion; epithelial cell; surface receptor;
carbohydrate antigen; gastritis; peptic ulcer; neoplasia;
gastric adenocarcinoma; Lewis antigen; fucosylation; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     derivative, as present in pdeltaI. This construct was generated by joining PCR fragments by means of overlaps introduced into the primers used for PCR. Gel purified products of primers used for PCR. Gel purified products of primers used for primers were mixed and subjected to further amplification using 5'Cla and 5D as primers. The resulting fragment was digested with ClaI and BglII and cloned into ClaI/BglII digested pTNFRecd, to yield pdeltaI, containing the sequence given. This derivative could be used to regulate TNF-alpha mediated responses by binding and sequestering human TNF-alpha e.g. in the treatment of pulmonary diseases, septic shock, HIV infection, malaria, viral
/number= 1
/note= "Corresponds to nucleotides +3 to
/note= "Corresponds to nucleotides +3 to
the human growth hormone (hGH) gene; it
desirable for cDNA coding for a human
fucosyltransferase to be inserted into
exon 1 of the hGH gene"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    meningitis, graft versus host disease and autoimmune diseases, rheumatoid arthritis.

See also Q24440-51, R24000, R24080-84, R27585, Q29236-8
Sequence 474 BP; 110 A; 126 C; 132 G; 106 T;
                                                                                                                                                     /*tag= a
/note= "Corresponds to nucleotides -596 to
/note= "Corresponds to binding protein
                                                                                                                                                                                                                                                    Chimeric -
                                                                                                                                                                                                                 promoter
                                                                                                                                                                                                                                                                 Chimeric -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cacagtggaccgggacaccgtgtgtgtggctgcaggaagaaccagtaccggcattattggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cgagtgtgtctcctgt 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGAGTGTGTCTCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         standard; cDNA; 2771 BP.
                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                               us sp.
Location/Qualifiers
1..617
                                                                                                                              620..2771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28.8%;
97.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 302; DB 4; I
Pred. No. 8.62e-203;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                +21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 474;
                                                                           of
f
                                                                                                                                                                                of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         esp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

Ş

Š 밁 S 문

밁

Ş

S 밁 Ş

밁

₽

```
Ş
                                                                                                       ğ
                                                                                                                                   ₽
                                                                                                                                                            Š
                                                                                                                                                                                       밁
                                                                                                                                                                                                               ğ
                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                              CC alls, the enzyme human GDP-L-fucose:beta-D-galactoside 2-alpha-L-CC fucosyltransferase (also called alpha 1,2 FT) or human GDP-L-fucose: beta-D-N-acetylglucosamide 3/4-alpha-L-fucosyltransferase (also called alpha 1,2 FT) or human GDP-L-fucose: CC beta-D-N-acetylglucosamide 3/4-alpha-L-fucosyltransferase (also control of a gut epithelial cell-specific promoter and Helicobacter CC pylori adheres to the transgenic cells. The transgenic mouse and CC compounds for the ability to inhibit adhesion of H. pylori to gut cepithelial cells. The first 617 nucleotides of the present chimeric CC sequence encode the promoter from rat liver fatty acid binding protein CC lineage of the mouse gastric epithelium, to proliferating and non-CC proliferating cells in intestinal crypts, as well as to the four CC which a sequence coding for a human fucosyltransferase (hFT) can be corresponds to exon 1 of the human growth hormone (hGH) gene, into CC which a sequence coding for a human fucosyltransferase (hFT) can be cefficient splicing of the transgene primary transcript, improves CC stability of the cytoplasmic hFT mRNA and allows transgene cC expression to be monitored by in situ hybridisation using a sequence 2771 BP; 666 A; 718 C; 704 G; 683 T;
                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US5625124-A.
29-APR-1997.
11-JUL-1994;
11-JUL-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Falk P, Gordon JI;
WPI; 97-258275/23.
Animal model for Helicobacter pylori infection - comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           transgenic mouse expressing adhesion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-JUL-1994; US-273411.
(UNIW) UNIV WASHINGTON
                                                                                                                                                                                                                                                                                                680
 306
                                                    246
                                                                             916
                                                                                                         186
                                                                                                                                                              126
                                                                                                                                                                                       798
                                                                                                                                                                                                                                           740
                                                                                                                                                                                                                 66
                                                                                                                                                                                                                                                                       σ
atggctacaggtaagcgcccctaaaatcccctttgggcacaatgtgtcctgaggggagagg
                                                                                                                                                                                                                                                                      ATGGCTACAGGTAAGCGCCCCTAAAATCCCTTTGGGCACAATGTGTCCTGAGGGGAGAGG
                                                                                                                                                                                                                                                                                                                          329;
                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-28; 24pp; English
                                                                                                                                                                                                                                                                                                                                     28.6%;
97.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human
                                                                                                                                                                                                                                                                                                                       Score 300; DB 31;
Pred. No. 2.90e-201;
0; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      enzyme promoting intestinal
                          1013
                                                                                                                                                                                                                                                                                                                                                Length 2771;
                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                         4.
                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                     855
                                                                                                                                                                                                                                           797
                                                                                                                                                                                                                                                                      65
                                                                                                                                                                                                                                                                                              739
                                                                             975
                                                                                                       245
                                                                                                                                915
                                                                                                                                                            185
                                                                                                                                                                                                                 125
```

completed: Wed me : 144 secs. мау 12:57:36 1998

THIS PAGE BLANK (USPTO)

如果我们的,我们的,我们的,我们的的,我们的的,我们的的,我们的的,我们的,我们的的,我们的我们的我们的我们的我们的我们的,我们的我们的我们的,我们的的,我们的	
*****	
*******	    
*******	
* * * * * * * * * * * * * * * * * * * *	
*****	
* * * * * *	(TM)

Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997. University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_nn n.a. - n.a. database search, using Smith-Waterman algorithm

Run on: Wed May 6 12:38:32 1998; MasPar time 969.27 Seconds 1315.719 Million cell updates/sec

Tabular output not generated.

Description: Perfect Score: N.A. Sequence: >US-08-804-166-1 (1-1049) from US08804166.seq 1049

1 TCCACATGGCTACAGGTAAG......TATTATCACACAAATCTTAAG 1049
AGGTGTACCGATGTCCATTC.....AATAATAGTGTTTTAGAATTC

Scoring table: TABLE default Gap 6

Nmatch STD: Dbase 0; Query 0

Searched: 1610801 seqs, 607859669 bases x 2

Post-processing: Minimum Match 0% Listing first 45 summaries

Database:

embl-est

Database:

1:em\_est1 2:em\_est2 3:em\_est3 4:em\_est4 5:em\_est5 6:em\_est6 7:em\_est8 8:em\_gss 9:em\_est13 genbank-est 11:gb\_est2 12:gb\_est3 13:gb\_est4 14:gb\_est5 10:gb\_est1 11:gb\_est7 17:gb\_est8 18:gb\_est9 19:gb\_est10 20:gb\_est11 21:gb\_st 22:gb\_est3 23:gb\_est12 24:gb\_est13 25:gb\_est14 26:gb\_est15 27:gb\_est16 28:gb\_est17 29:gb\_est18 30:gb\_est19 31:gb\_est20

Statistics: Mean 11.127; Variance 1.959; scale 5.680

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

×

Query Match Length	gth DB	:	Description	Pred. No.
6	373 23	HUM505B08B	Human placenta cDNA 5'	0.00e+00
24.6	379 2	C18240	Human placenta cDNA 5'	0.00e+00
Ó	392 13	. R76249	yi72b05.rl Homo sapien	0.00e+00
ō	464 2	C17209	Human placenta cDNA 5'	0.00e+00
ō		R71429	Hon	
Ġ		1 Н00861	yj31h01.rl Homo sapien	0.00e+00
4		R23843	Ноп	
4	452 12	H00781	yj30d01.r1 Homo sapien	
ັນ		C17142	Human placenta cDNA 5'	
ė		C18403	Human placenta cDNA 5'	0.00e+00
œ	458 1:	R77385	yi75dll.rl Homo sapien	0.00e+00
3.6	482 1:	№ ноз289	yj44h10.rl Homo sapien	0.00e+00
3.4	336 2:	HUM530G10B	Human placenta cDNA 5'	0.00e+00

	O	ი						ი					ი				a												ი	
4 4 5	43	42	41	40	39	38	37	36	35	34	ω ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14
188	194	194	195	196	197	201	202	203	203	203	205	210	212	213	214	214	215	216	216	219	219	221	226	226	227	227	229	232	234	236
18.3 17.9	18.5	18.5	18.6	18.7	18.8	19.2	19.3	19.4	19.4	19.4	19.5	20.0	20.2	20.3	20.4	20.4	20.5	20.6	20.6	20.9	20.9	21.1	21.5	21.5	21.6	21.6	21.8	22.1	22.3	22.5
344 11 267 13																									0	ω	471 1	ω	ø	9
1 R27121 3 N40676 ALIGNMENTS							3 HUM525D05B				3 HUM511F08B			3 H77743						1 R23095		AA441						_		3 C18044
	Soare	.s1 Homo	.rl Homc	.rl Homo	rl Soar	yw65f07.rl Homo sapien		zj19d06.sl Soares feta	Homo	yh39b02.rl Homo sapien	Human placenta	.rl Homo sa	.sl Soar	.rl Homo	.r1	.rl Homo	.sl Soares	Soar	Human place	rl Homo	.rl Homo	sl Soar	.rl Homo sa	.rl Soare	.rl Homo	.rl Homo	.rl Homo	lacenta c	zj46hll.sl Soares feta	Human placenta cDNA 5'
0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00

	COMMENT	TITLE	JOURNAL REFERENCE AUTHORS	TITLE	REFERENCE AUTHORS	SOURCE ORGANISM	ACCESSION NID KEYWORDS	RESULT 1 LOCUS DEFINITION
Otsuka GEN Research Institute Otsuka GEN Research Institute Otsuka Pharmaceutical Co.,Ltd 463-10 kagasuno Kawauchi-cho Tokushima, Tokushima 771-01 Japan Phone: 0886-65-2888	Fujiwara, Otsuka GEN Research Institute, Otsuka Pharmaceutical Co., Ltd; 463-10 Kagasuno Kawauchi-cho, Tokushima, Tokushima 771-01, Japan (Tel:0886-65-2888, Fax:0886-37-1035) Submitted (30-May-1995) to DDBJ by:	Direct Submission Submitted (30-MAY-1995) to the DDBJ/EMBL/GenBank databases.	Unpublished (1995) 2 (bases 1 to 373) Fullwara, T.	Okuno,S., Ozaki,K., Shimlzu,F., Shimada,Y., Shinomiya,H., Takaichi,A., Takeda,S., Watanabe,T., Takahashi,E., Hirai,Y., Maekawa,H., Shin,S. and Nakamura,Y. Unpublished(004)	Eukaryotae; mitochondria; eukaryotes; metazoa; Chordata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.  1 (bases 1 to 373) Fujiwara,T., Hirano,H., Katagiri,T., Kawai,A., Kuga,Y., Nagata,M			1 HUM505B08B 373 bp mRNA EST N Human placenta cDNA 5'-end GEN-505B08.
	tsuka Pharmaceutical kushima, Tokushima 771-01, }	GenBank databases. Tsutomu		., Shinomiya,H., hashi,E., Hirai,Y.,	azoa; Chordata; Catarrhini; Hominidae; i,A., Kuga,Y., Nagata,M.,	tech human placenta polyA+	lacenta; similar to	ST 21-MAY-1996

```
TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                            Keywords
                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
              Query Match 24.6%;
Best Local Similarity 98.9%;
Matches 259; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                        JOURNAL
                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCAGTGCATGGGCTGCTGCTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC 166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACT 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA 226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTGTTATTATCACAAATCTTAA 1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTGTTATTATCACAAATCTTAA 308
                                                                                                                                                              Submitted (24-JUN-1996) to the DDBJ/EMBL/GenBank databases. Tsutomu Fujiwara, Otsuka GEN Research Institute, Otsuka Pharmaceutical Co., Ltd: 463-10 Kagasuno Kawauchi-cho, Tokushima, Tokushima 771-01, Japan (Tel:+81-886-65-2888, Fax:+81-886-37-1035)
                                                                                                                                                                                                                                        Otsuka cDNA project
Unpublished (1996)
2 (bases 1 to 379)
                                                                                                                                                                                                                                                                             Fujiwara, T., Hirano, H., Hishigaki, H., Horie, M., Kawai, A., Kug. Kyushiki, H., Nagata, M., Okuno, S., Ozaki, K., Shimizu, F., Shimas Shinomiya, H., Suzuki, M., Takaichi, A., Takeda, S., Watanabe, T., Maekawa, H., Nakamura, Y. and Takahashi, E.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Human placenta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fax
                                                                                                                                                                                                                     Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                          EST; EST(expressed sequence tag); Human placenta. Homo sapiens placenta cDNA to mRNA, clone:559D08.
                                                                                                                                                                                                                                                                                                                                                         Vertebrata; Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 24.6%;
Similarity 99.2%;
                                                                                                                                                                                                                                                                                                                                 (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0886-37-1035
                                                                                                    /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="559D08"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="Clontech human placenta
88 c 84 g 107 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                           /tissue_type="placenta"
95 c 85 g 1
                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                       mitochondrial eukaryotes; Metazoa; Chordata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        379
                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA 5'-end GEN-559D08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ď
                          Score 258; DB 23; Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 258; DB 23; Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                Mismatches
                                                                            104
                                                                            4
                                     Length 379;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                            ь
               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                            others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 polya+ mRNA (#6518)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09-SEP-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
              0
                                                                                                                                                                                                                                                                                                     Shimada, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       966
              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                       BASE COUNT
ORIGIN
                                                                                                    FEATURES
                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                              TITLE
JOURNAL
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1027
                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            67
```

```
CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTTGTTAGCTAAATCATATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTARGGTCCAAGAAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCCAGCCGGGTGCCCCAATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCCAGCCGGGTGCCCCAATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTGTTATTATCACAAATCTTAA 1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTGTTATTATCACAAATCTTAA 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGGTCACAGTCATGGGGGGTTTCAAAGTGGAGAACCACACGGGGTGCCACTGCAGTAC
                                                                                                                 Tel: 314 286 1800

Email: est@watson.wustl.edu

Email: est@watson.wustl.edu

High quality sequence stops: 328

Source: IMAGE Consortium, LLNL

This clone is available royalty-free through LLNL;

IMAGE Consortium (info@image.llnl.gov) for further i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomla; Chordata; Vertebrata; Gnathostomata; Osteicht Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia; Theri Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 392)
Hiller, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M., Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M. Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F., Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and Wilson, M., Waterston, R., Williamson, A., Wohldmann, P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9850931
EST.
                                                                                                                                                                                                                                                                                                    Contact: Wilson RK
WashU-Merck EST Project
Washington University Scho
4444 Forest Park Parkway,
                                                                                                                                                                                                                                                                                                                                                                                                                                     The WashU-Merck EST Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library went through one round of normalization. Library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  y172b05.r1 Homo sapiens cDNA clone 144753 3'GLYCOPROTEIN HORMONES ALPHA CHAIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   constructed by Bento Soares and M.Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wilson, R.
     100
/organism="Homo sapiens"
/clone="144753"
90 c 89 g 11
                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Project
                                                                                                                                                                                                                                                                                                      School of Medicine way, Box 8501, St. )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA
  112
                                                                                                                                                                                                                                                                                                           Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3' similar to gb:V00518
OR (HUMAN);
     others
                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06-JUN-1995
                                                                                                                                                     contact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Osteichthyes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Marra, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Theria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            846
```

24.6%; 99.2%;

Score Pred.

258; DB 11; No. 0.00e+00;

Length 392;

```
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
Ş
                               В
                                                         Qy
                                                                                             문
                                                                                                                      Š
                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1027
                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              787
 907
                                159
                                                                                                                             787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
S
                                                                                             99
                                                                                                                                                            39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTAC 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA 218
                                                                               TCAGTGCATGGGCTGCTTCTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC 158
                                                                                                                                            TTGCCCAGAATGCACGCTACAGGAAAACCCCATTCTTCTCCCCAGCCGGGTGCCCCAATACT 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTGTTATTATCACAAATCTTAA 1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTGTTATTATCACAAATCTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGGGTCACAGTCATGGGGGGTTTCAAAGTGGAGAACCACACGGGGTGCCACTGCAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAGTGCATGGGCTGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACT
GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA 966
                                                              TCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC 906
                                                                                                                           TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACT 846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lulwara, T., Hirano, H., Hishigaki, H., Horie, M., Kawai, A., Kuga, Y., Kyushiki, H., Nagata, M., Okuno, S., Ozaki, K., Shinizu, F., Shimada, Y., Shinomiya, H., Suzuki, M., Takaichi, A., Takeda, S., Watanabe, T., Maekawa, H., Nakamura, Y. and Takahashi, E. Otsuka CDNA project Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human pla
C17209
g1571916
                                                                                                                                                                                                                                                                                                                                                                                 Submitted (13-MAY-1996) to the DDBJ/EMBL/GenBank databases. Tsutomu Fujiwara, Otsuka GEN Research Institute, Otsuka Pharmaceutical Co., Ltd; 463-10 Kagasuno Kawauchi-cho, Tokushima, Tokushima 771-01, Japan (Tel:+81-886-65-2888, Fax:+81-886-37-1035)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           260;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fujiwara,T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hc
                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST(expressed sequence tag); Human placenta sapiens placenta cDNA to mRNA, clone:541F08
                                                                                                                                                                                        24.6%;
llarity 99.2%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       placenta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                      /tissue_type="placenta"
117 c 95 g 1
                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                      2
                                                                                                                                                                                                                                                                                                     one-"541F08"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5'-end GEN-541F08
                                                                                                                                                                                                       Score 258; DB 23; Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                          0
                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                       138
                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>ب</u>
                                                                                                                                                                                                                       Length 464;
                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               966
                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
LOCUS
덩
                               δõ
                                                                       밁
                                                                                                     δÃ
                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                              Matches
                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                 Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1027
                                                                                                                                                                                                                                                                                                                            source
                                   847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 219
170
                                                                       110
                                                                                                          787
                                                                                                                                          50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTGTTATTATCACAAATCTTAA 1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTGTTATTATCACAAATCTTAA 300
GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA 229
                                   TCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCCACTCCACTAAGGTCCAAGAAGAC
                                                                                                                       TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACT 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  G
                                                                       TCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC 169
                                                                                                        TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCCAATACT 846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteicht Sarcopterygil; Choanata; Tetrapoda; Amniota; Mammalia; Theri Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 467) Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hakkins, M., Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M. Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F., Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and Wilson, D. & Waterston, R., Williamson, A., Wohldmann, P. and Wilson, D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g844946
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                   Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WashU-Merck EST Project
Washington University Sch
4444 Forest Park Parkway,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The WashU-Merck EST Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT/T3 vector. Library went through one round of normalization. Library constructed by Bento Soares and M.Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        y151d03.rl Hc
GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                              This clone is available royalty-free through LLNL; IMAGE Consortium (info@image.llnl.gov) for further i
                                                                                                                                                                                                                                                                                                                                                                                                  Source: IMAGE Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                  High quality sequence stops:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Wilson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wilson, R.
                                                                                                                                                                                         n 24.68;
Similarity 99.28;
                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/clone="142757"
114 c 98 g 13
                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
1. .467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens cDNA clone 142757 5' similar to gb:v00518 IN HORMONES ALPHA CHAIN PRECURSOR (HUMAN);.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ď
                                                                                                                                                                          Score 258; DB 11;
Pred. No. 0.00e+00;
0; Mismatches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        School of Medicine way, Box 8501, St.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA
                                                                                                                                                                                                                                                                                                                                                                                                   LLLI
                                                                                                                                                                                                                                                                      139
                                                                                                                                                                                                                                                                      rt
                                                                                                                                                                                ..
N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Louis,
                                                                                                                                                                                                                Length 467;
                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                      others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                             contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Marra, M.,
                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Osteichthyes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Theria;
                                                                                                                                                                              Gaps
                                   906
                                                                                                                                                                              0
```

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
 Ş
                                  밁
                                                              ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                            Query Match 24.5%;
Best Local Similarity 98.9%;
Matches 259; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1027
                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       907
    847
                                                                 787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         290
                                78
                                                                                               18
                                                                              TTGCCCAGAATGCACGCTACAGGANAACCCATTCTTCTCCCCAGCCGGGTGCCCCAATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGGGTGCCACTGCAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC 137
                                                           TTGCCCAGAATGCACGCTACAGGAAAACCCCATTCTTCTCCCAGCCGGGTGCCCCAATACT 846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGGGTCACAGTCATGGGGGGTTTCAAAGTGGAGAACCACACGGGGTGCCACTGCAGTAC 1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTGTTATTATCACAAATCTTAA
TCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wilson, R.
The WashU-Merck EST F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTGTTATTATCACAAATCTTAA 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichthyes; Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 423)
Hiller,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M., Parsons,J., Rifkin,L., Rohlfing,T., Soates,M., Tan,F., Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tel: 314 286 1800

Fax: 314 286 1810

Email: est@watson.wustl.edu

High qality sequence stops: 344

Source: IMAGE Consortium, LLNL

This clone is available royalty-free through LLNL; contact the

IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                              Contact: Wilson RK
WashIngton University School of Medicine
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g863794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            yj31h01.rl Homo sapiens cDNA clone GLYCOPROTEIN HORMONES ALPHA CHAIN P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H00861
                                                                                                                                                                                                             œ
                                                                                                                                                                                                          /organism="Homo sapiens"
/clone="150385"
95 c 95 g 11
                                                                                                                                                                                                                                                         1. .423
                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Project
                                                                                                                           Score 257; DB 12;
Pred. No. 0.00e+00;
0; Mismatches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MRNA
                                                                                                                                                                                                          119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            e 150385 5'
                                                                                                                                                                                                          rt
                                                                                                                                                        Length 423
                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5' similar
                                                                                                                            Indels
                                                                                                                                                                                                          others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (HUMAN);
                                                                                                                                                                                                                                                                                                                                                                                                MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-JUN-1995
                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ç
                                                                                                                         Gaps
 906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  966
```

```
REFERENCE
AUTHORS
Ş
                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                              밁
                                                                                      밁
                                                                                                                                                                            BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                 Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1027
                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                907
                                                       138
                              62
                                                                                       N
                  TACTTCAGTGCATGGGCTGCTGCTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGA 121
 TACTTCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGA
                                                                                    CAGGATTGCCAGAATGCACGCTACAGGAAAACCCCATTCTTCTCCCAGCCGGGTGCCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTGTTATTATCACAAATCTTAA 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTAC 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            yh48c04.r1 Ho
GLYCOPROTEIN
R23843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9778731
EST.
                                                                                                                                                                                                                                                                                                                   Tel: 314 286 1800
Fax: 314 286 1810
Email: estéwatson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 433)

Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M.,
Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M.,
Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F.,
Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and
                                                                                                                                                                                                                                                          High quality sequence stops; 334 Source: IMAGE Consortium, LLNL This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                               WashU-Merck EST Project
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                      The WashU-Merck EST Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                 h 24.4%;
Similarity 98.1%;
261; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eucaryotae; Metazoa; Chordata; Vertebrata; Gnathostomata; Mammalla;
Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                         9
                                                                                                                                                                                                     /organism="Homo sapiens"
/clone="132966"
                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens cDNA clone 132966 5'
                                                                                                                                                                                        104 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Project
                                                                                                               Score 256; DB 11;
Pred. No. 0.00e+00;
0; Mismatches 5
                                                                                                                                                                                        90 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA
                                                                                                                                                                                        127
                                                                                                                                                                                        ct
                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                  Louis,
                                                                                                                                            Length 433;
                                                                                                                                                                                        щ
                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (HUMAN);.
                                                                                                                                                                                        others
                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-APR-1995
                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       to gb: V00518
                                                                                                                  Gaps
 902
                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                966
                                                                                                                  0
```

```
TITLE
JOURNAL
COMMENT
                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
 밁
                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pocas
                                                                                Query Match
Best Local S
Matches 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1023
                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          903
                         787
104 TCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC
                                                     44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGACGATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCAT
                         TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACT 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTACTTGTTATTATCACAAATCTTAA 1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTACTTGTTATTATCACAAATCTTAA 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WashU-Merck EST Project
WashIngton University School of Medicine
4444 Ingrom Park Parkway, Box 8501, St. I
Tel: 314 286 1810
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                            The
                                                                                                                                                                                                                                                                                                                                                                                                                                   Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F., Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Trevaskis, E., Waterston, R., Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Ossarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia;
                                                                                                                                                                                                                      High qality sequence stops: 322 Source: IMAGE Consortium, LLNL This clone is available royalty-free through LLNL IMAGE Consortium (info@image.llnl.gov) for further
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         yj30d01.rl Homo sapiens cDNA clone GLYCOPROTEIN HORMONES ALPHA CHAIN P
                                                                                                                                                                                                                                                                                                                                                                    Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                               similarity 99.2%;
258; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 452)
                                                                                                                                                                                                                                                                                                                                                                                              WashU-Merck EST
ublished (1995)
                                                                                                                                                      107
                                                                                                                                                   /organism="Homo sapiens"
/clone="150241"
104 c 103 g 13
                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Archonta; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  đđ
                                                                                                                                                                                                                                                                                                                                                                                                             Project
                                                                               Score 256; DB 12; I
Pred. No. 0.00e+00;
0; Mismatches 2;
                                                                                                                                                      133
                                                                                                                                                      "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    150241
                                                                                                                                                                                                                                                                                                                           Louis, MO
                                                                                                            Length 452;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hominidae; Homo
                                                                                Indels
                                                                                                                                                                                                                           further information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (HUMAN);
                                                                                                                                                      others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ar to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19-JUN-1995
                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Marra, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Osteichthyes;
                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                0
```

```
TITLE
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                       밁
                                                                                                                                 ₽
                                                                                                                                                           Š
                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
               밁
                                      δÃ
                                                                                                 Š
                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                    용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HID
                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
TITLE
                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                               Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1027
                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    847
                                            971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         907
               241
                                                                                                                                 121
                                                                                                                                                               851
                                                                                                                                                                                                                        791 CCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACTTCAG
                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                            61 TGCATGGGCTGCTGCTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGACGATG 120
                                                                                                                                                                                                                                       1 CCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTGTTATTATCACAAATCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGGGTCACAGTAATGGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATTATCACAAATCTTAA
                                                                                                                   TTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAACAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTGGCTAAATCATATAA
                                                                          GTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTACTTGT
                                                                                                       TTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAACAGG
                                                                                                                                                               TGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGACGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTGTTATTATCACAAATCTT 1046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C17142
g1571849
                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (13-MAY-1996) to the DDBJ/EMBL/GenBank databases. Tsutomu Fujiwara, Otsuka GEN Research Institute,Otsuka Pharmaceutical Co.,Ltd: 463-10 Kagasuno Kawauchi-cho, Tokushima, Tokushima 771-01, Japan (Tel:+81-886-65-2888, Fax:+81-886-37-1035)
Location/Qualifiers
1. .478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fujiwara,T., Hirano,H., Hishigaki,H., Horie,M., Kawai,A., Kyushiki,H., Nagata,M., Okuno,S., Ozaki,K., Shimizu,F., S
Shinomiya,H., Suzuki,M., Takaichi,A., Takeda,S., Watanabe
Maekawa,H., Nakamura,Y. and Takahashi,E.
                                                                                                                                                                                                                                                                                  256;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Otsuka cDNA
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fujiwara, T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Vertebrata; Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryotae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo
                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (sites)
                                                                                                                                                                                                                                                                                                                                                         125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST(expressed sequence tag); Human placenta sapiens placenta cDNA to mRNA, clone:539G04
                                                                                                                                                                                                                                                                               24.2%;
larity 99.2%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              placenta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NA project
led (1996)
1 to 478)
                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="539G04"
                                                                                                                                                                                                                                                                                                                                                      /tissue_type="placenta"
113 c 96 g 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mitochondrial eukaryotes; Metazoa; Chordata; Mammalia; Eutheria; Primates; Catarrhini; Ho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cDNA 5'-end GEN-539G04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           å
                                                                                                                                                                                                                                                                               Score 254; DB 23;
Pred. No. 0.00e+00;
0; Mismatches 2
                                                                                                                                                                                                                                                                                                                                                         144
                                                                                                                                                                                                                                                                                  2:
                                                                                                                                                                                                                                                                                                              Length 478;
                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-SEP-1996
                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hominidae;
                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Shimada,Y.,
                                              1030
                                                                                                                                   180
                                                                                                                                                               910
                                                                                                                                                                                                                         850
                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       223
                                                                                                       970
```

```
TITLE
JOURNAL
REFERENCE
AUTHORS
                                                                                                        RESULT
LOCUS
                                                                                                                                                                                 밁
                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                  Ϋ́
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
LOCUS
                                                                                                                                                        Ş
                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                       å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ş
                     SOURCE
                                            NID
                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          UIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNT
                                                                                                                                                          1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                 306
                                                                                                                                                                                                         967
                                                                                                                                                                                                                                                           907
                                                                                                                                                                                                                                                                                   187
                                                                                                                                                                                                                                                                                                          847
                                                                                                                                                                                                                                                                                                                                  127
                                                                                                                                                                                                                                                                                                                                                           787
                                                                                                                                                                                                                                                                                                                                                                                   67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10
                                                                                                                    11
                                                                                                                                                                                                                                                        GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA
                                                                                                                                                                                                                                                                                                                                                     TTGTTATTATCACAAATCTTAA 327
                                                                                                                                                                                                                     CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGA-CCACACGGCGTGCCACTGCAGTAC
                                                                                                                                                        TTGTTATTATCACAAATCTTAA 1048
                                                                                                                                                                                                       CAGGGTCACAGTCATGGGGGGTTTCAAAGTGGAGAACCACACGGGGTGCCACTGCAGTAC
                                                                                                                                                                                                                                                                    GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA 246
                                                                                                                                                                                                                                                                                                                       TCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATTATCACAAATCTTAA 1048
                                                                                                                                                                                                                                                                                                        TCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC
                                                                                                                                                                                                                                                                                                                                                                                                         ch 23.9%;
l Similarity 98.9%;
259; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
Submitted (24-JUN-1996) to the DDBJ/EMBL/GenBank databases. Tujiwara, Otsuka GEN Research Institute,Otsuka Pharmaceutical Co., Ltd; 463-10 Kayasuno Kawauchi-cho, Tokushima, Tokushima 7 Japan (Tel:+81-886-65-2888, Fax:+81-886-37-1035)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fujiwara,T., Hirano,H., Hishigaki,H., Horie,M., Kawai,A., Kug
Kyushiki,H., Nagata,M., Okuno,S., Ozaki,K., Shimzu,F., Shima
Shinomiya,H., Suzuki,M., Takaichi,A., Takeda,S., Watanabe,T.,
Maekawa,H., Nakamura,Y. and Takahashi,E.
EST.
human clone=145077 library=Soares placenta Nb2HP vector-pr7T3D (Pharmacia) with a modified polylinker host=DH10B (ampicillin
                                                                    GLYCOPROTEIN
                                                                                y175dll.rl
                                                                                                         R77385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST; EST(expressed sequence tag); Human placenta.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g1580005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fujiwara, T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Omo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                placenta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissue_type="placenta"
87 c 73 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="561H02"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                  Homo sapiens cDNA clone 145077 5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (1996)
1 (1996)
1 to 330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          330
                                                                                                        458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cDNA 5'-end GEN-561H02
                                                                                                      ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         đđ
                                                                                                                                                                                                                                                                                                                                                                                                         Score 251; DB 23;
Pred. No. 0.00e+00;
0; Mismatches 2
                                                                                                        mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST
                                                                                                                                                                                                                                                                                                                                                                                                                               Length 330;
                                                                               ú
                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                 (HUMAN);.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-SEP-1996
                                                                                                      06-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                         <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Shimada, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kuga, Y.,
                                                                                                                                                                                                        1026
                                                                                                                                                                                                                               305
                                                                                                                                                                                                                                                        966
                                                                                                                                                                                                                                                                                                          906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tsutomu
                                                                                                                                                                                                                                                                                                                                                                                                        ۲.
                                                                             RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
ORIGIN
                   ACCESSION
NID
                                                                                                                             Ş
                                                                                                                                                      밁
                                                                                                                                                                            Š
                                                                                                                                                                                                       밁
                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                        무
                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
      KEYWORDS
                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                             1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                               855
                                                                                                                                                                              975
                                                                                                                                                                                                                               915
                                                                                                                                                                                                                                                        136
                                                                                                                                                                                                                                                                                                       76
                                                                                         12
     H03289
9866222
EST.
                                                                                                                                                                                                                                                                                                                                                                                252;
                                                                              H03289
                                                                                                                                                                                                                                                                                                                                                                                                                                            119
```

```
196 CAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGGGTGCCACTGCAGTACTTGTTATT 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           256 ATCACAAATCTTAA 269
                                                                                                                                                                                                                                                                                                                                                             TCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTGGCTAAATCATATAACAGGGTCA 195
                                                                                                                                                                                                                                                                                                                                                                                                                         TGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGACGATGTTGG 914
                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGGCTGCTTCTCTAGAGCATATCCCACTCACTAAGGTCCAAGAAGACGATGTTGG 135
                                                                                                                                                         ATCACAAATCTTAA 1048
                                                                                                                                                                                                                                                CAGTCATGGGGGGTTTCAAAGTGGAGAACCACACGGGGTGCCACTGCAGTACTTGTTATT
                                                                                                                                                                                                                                                                                                                                    TCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTAGCTAAATCATATAACAGGGTCA 974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F., Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Ost Sarcopterygil; Choanata; Tetrapoda; Amniota; Mammalia; Eutheria; Archonta; Primates; Catarrhini; Hominidae; Holloses 1 to 458)
                    yj44h10.r1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Source: IMAGE Consortium, LLNL This clone is available royalty-free through LLNL; IMAGE Consortium (info@image.llnl.gov) for further
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Wilson RK
WashU-Merck EST Project
Washington University Scho
4444 Forest Park Parkway,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library went through one round of normalization. Library constructed by Bento Soares and M.Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  yj44h10.r1 Homo sapiens cDNA clone 151651 5' GLYCOPROTEIN HORMONES ALPHA CHAIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The WashU-Merck EST Project 
Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      High quality sequence stops:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23.8%;
larity 99.2%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/clone="145077"
109 c 97 g 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                  482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . 24;
                                                                  å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 250; DB 11;
Pred. No. 0.00e+00;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  School of Medicine way, Box 8501, St.
                                                                  mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 458;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
  (HUMAN);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                  20-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Marra, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Osteichthyes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Theria;
                    gb: V00518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                1034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
DEFINITION
ACCESSION
NID
                                                                                        RESULT
LOCUS
                                                                                                                                                      S
                                                                                                                                                                                     밁
                                                                                                                                                                                                                ą
                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                      용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                      1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                    171
                                                                                                                                                                                      291
                                                                                                                                                                                                                       967
                                                                                                                                                                                                                                                     231
                                                                                                                                                                                                                                                                                    907
                                                                                                                                                                                                                                                                                                                                                                                    111
                                                                                                                                                                                                                                                                                                                                                                                                                    787
                                                                                                                                                                                                                                                                                                                                                                                                                                                    51
                                                                                                       13
                                                                                                                                                                       ACTTGTTATTATCACAAATCTTAA 314
                                                                                                                                                                                                                                                                               GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA 230
                                                                                                                                                                                                                                                                                                                                                                                                                 CAGGGTCACAGTAATGGGGGGGTTTCAAAGTGGGAGAACCACACGGGCGTGCCACTGCAGT
                                                                                                                                                                                                                                                                                                                                                 CAGGGTCACAGTCATGGGGGGTTTCAAAGTGG-AGAACCACACGGG-GTGCCACTGCAGT
                                                                                                                                                      ACTTGTTATTATCACAAATCTTAA 1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     261;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Source: IMAGE Consortium, LLNL This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WashU-Merck EST Project

WashIngton University School of Medicine

4444 Forest Park Parkway, Box 8501, St. I

Tel: 314 286 1800

Fax: 314 286 1810

Fax: 314 286 1810

Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human clone=151651 library=Soares placenta Nb2HP vector=p7773D (Pharmacia) with a modified polylinker host-DH10B (ampicillin resistant) primer=M13RP1 Rsite1=Not I Rsite2=Eco RI Female placenta obtained at birth (full term). 1st strand cDNA was primed with a Not I - oligo(dT) primer [5]
                       Human placenta cDNA 5'-end GEN-530G10
D79076
g1180949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The WashU-Merck EST Project Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hillier,L., Clark,N., Dubuque,T., Elliston, Holman,M., Hultman,M., Kucaba,T., Le,M., Le Parsons,J., Rifkin,L., Rohlfing,T., Soares, Trevaskis,E., Waterston,R., Williamson,A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata;
Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichthyes;
Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia; Theria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT/T3 vector. Library went through one round of normalization. Library constructed by Bento Soares and M.Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              High qality sequence stops:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eutheria; Archonta; Primates; Catarrhini; Hominidae; (bases 1 to 482)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                        HUM530G10B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/clone="151651"
106 c 118 g 14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23.6%;
                                                                                        336
                                                                                      ďq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 248; DB 12;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Elliston, K., Hawkins, M.,
Le, M., Lennon, G., Marra, M.,
., Soares, M., Tan, F.,
., Soares, M., Tan, F., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 482;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ĕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ņ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                  170
                                                                                                                                                                                                                       1024
                                                                                                                                                                                                                                                   290
                                                                                                                                                                                                                                                                                                                                                    906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
                       KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
SOURCE
                                                                   DEFINITION
ACCESSION
                                                                                                                    RESULT
LOCUS
                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                             δã.
                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                   Š
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                       UIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                      1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                   967
                                                                                                                                                                                                                                                                                227
                                                                                                                                                                                                                                                                                                                  907
                                                                                                                                                                                                                                                                                                                                                                                  847
                                                                                                                                                                                                                                                                                                                                                                                                                 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                 787
                                                                                                                                                                                                                                                                                                                                                 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                     14
                                                                                                                                                                                                                                                                    CAGGGTCACAGTAATGGGGGGTTTCATAGTGGGGACCCACACGCGCGTGCCACTGCAGTAC 286
                                                                                                                                                                                     TIGITATTATCACAA 301
                                                                                                                                                                                                                                                                                                                                                                                  TCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC
                                                                                                                                                                                                                                                   CAGGGTCACAGTCATGGGGGGTTTCAAAGTGGAGAACCACACGGGGTGCCACTGCAGTAC
C10044
g1579646
EST; EST(expressed sequence tag); Human placenta.
Homo sapiens placenta cDNA to mRNA, clone:556F06.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   250;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fujiwara, T., Hirano, H., Katagiri, T., Kawai, A., Kuga, Y., Nagata, I Okuno, S., Ozaki, K., Shimizu, F., Shimada, Y., Shinomiya, H., Takada, I., Takeda, S., Watanabe, T., Takahashi, E., Hirai, Y., Maekawa, H., Shin, S. and Nakamura, Y.
Large-scale sequencing project at Otsuka GEN Research Institute Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Otsuka Pharmaceutical CO.,Ltd
463-10 Kagasuno Kawauchi-cho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tsutomu Fujiwara
Otsuka GEN Research Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (7-Nov-1995) to DDBJ by:
                                                                                    Human placenta cDNA 5'-end GEN-556F06.
                                                                                                                      C18044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Phone:0886-65-2888
Fax :0886-37-1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               771-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tokushima, Tokushima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Vertebrata; Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               33.48;
Similarity 98.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 336)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 336)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mitochondrial eukaryotes; Metazoa; Chordata; Mammalia; Eutheria; Primates; Catarrhini; HC
                                                                                                                      519
                                                                                                                    φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 245; DB 23;
Pred. No. 0.00e+00;
0; Mismatches 5
                                                                                                                      mRNA
```

EST; EST(expressed sequence tag); Human placenta. Homo sapiens placenta cDNA to mRNA, clone\_lib:human placenta Hominidae;

Submitted (07-NOV-1995) to the DDBJ/EMBL/GenBank databases. Tsutomu Fujiwara, Otsuka GEN Research Institute,Otsuka Pharmaceutical Co.,Ltd, 463-10 Kagasuno Kawauchi-cho, Tokushima, Tokushima 771-01,

/organism="Homo sapiens"
/db\_xref="taxon:9606"
/clone\_lib="human placenta polyA+"
/clsue\_type="placenta"
/tissue\_type="placenta"
89 c 78 g 93 t

Length Indels 336; 0 Gaps 0

TCAGTGCATGGGCTGCTGCTCTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC 166 TIGCCCAGAATGCACGCIACAGGAAAACCCATTCTTCTCCCCAGCCGGGTGCCCCAATACT 106 TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACT 846

GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTTGTAGCTAAATCATATAA 226 GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA 966

906

09-SEP-1996

```
TITLE
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE CO
                                                              REFERENCE
                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                     KEYWORDS
                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                         AUTHORS
                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                        302
                                                                                                                                                                                                                                                                                                                                                                                            338
                                                                                                                                                                                                                                                                                                                                                                                                                                242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           σ
                                                                                                                                                                                                                                                                                                 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGGCTGCAGGTAAGCGCCCCTAAAANNNTTTGGGCACAACGTGTCCTGAGGGGAGAGG 99
                                                                                                                                                                                                                                                                                                                                                                         TITGCCCTGCTCTGCCTGCCCTGCCTTCA-GAGGCTGCTGCTGCCG 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGCTCCCT-TCTTGCCCTCCGGTTTCTCCCCAGGCTCCCGGACGTCCCTTCTCCTGCCT 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGAGAGAGAAAAAGAAAACAGCTCCTGGAACAGGGAGAGTACTGGCCTCTTGCTCTG 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATCGCCATGTAAGCCCAG-TATTTGGCCAATCTCAGAAAGCTCCTCCTCCCTGGAGGGA 184
                                                                                                                                                                                                                                                                                                                                                   TTTGGCCTGCTCTGCCTGCCTTCAAGAGGGCAGTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATCGCCATCTAAGGCCAGATATTTGGCCAATCTCTGAATGTTCCTGGTCCCTGGAGGGA 218
                                                                                                                                                                                                                                                                                                                                                                                                                             CGGCTCCCTCTGCTCTGGTTTCTCCCCAGGCTCCCGGACGTCCCTGCTCCTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGAGAGAGA--AAAACAAA-CAGCTCCTGGAGCAGGGAGAGTGCTGGCCTCTTGCTCTC 241
                                                                                                                                                 z)46hll.sl Soares fetal liver spleen lNFLS S1 Homo sapiens cDNA cLone 453381 3' similar to gb:V00518 GLYCOPROTEIN HORMONES ALPHA CHAIN PRECURSOR (HUMAN);.
AA779136
g2838467
EST.
Eukaryotae: Metazoa; Chordata; Vertebrata; Mammalia; Eutheria; Primates; Catarriini; Hominidae; Homo.

1 (bases 1 to 519)

Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S. Krizman,D., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (24-JUN-1996) to the DDBJ/EMBL/GenBank databases. Fujiwara, Otsuka GEN Research Institute,Otsuka Pharmaceutica. CO.,Ltd; 463-10 Kagasuno Kawauchi-cho, Tokushima, Tokushima Japan (Tel:+81-886-65-2888, Fax:+81-886-37-1035)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fujiwara,T., Hirano,H., Hishigaki,H., Horie,M., Kawai,A.,
Kyushiki,H., Nagata,M., Okuno,S., Ozaki,K., Shimizu,F., S
Shinomiya,H., Suzuki,M., Takaichi,A., Takeda,S., Watanabe
Maekawa,H., Nakamura,Y. and Takahashi,E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Otsuka cDNA project
Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
Eukaryotae;
                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity 88.9%;
305; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vertebrata; Mammalia;
                                                                                                                                      tuman.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 519)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="556F06"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissue_type="placenta"
140 c 153 g 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mitochondrial eukaryotes; Metazoa; Chordata; Mammalia; Eutheria; Primates; Catarrhini; Ho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22.5%;
                                                                                                                                                                                                                                                                                519
                                                                                                                                                                                                                                                                               ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 236; DB 23;
Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 519;
                                                                                                                                                                                                                                                                                                                                                     344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Watanabe, T.,
                                                                                                                                                                                                                                                                               05-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Shimada, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tsutomu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6
```

Ş

용

Ş 밁 Ş 용 Ş 밁 δÃ 밁 Ş

Search completed: Wed May Job time: 979 secs.

q

12:54:51 1998

```
မှ
                             밁
                                                       င္
                                                                                    밁
                                                                                                                မှ
                                                                                                                                               밁
                                                                                                                                                                          ဌ
                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                   မှ
                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                             Query Match
Best Local 9
                                                                                                                                                                                                                                       1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                   928
                                                                                                                                                                              886
                                                                                    433
                                                                                                                                                373
                                                                                                                                                                                                        313
808
                                                                                                                                                                                                                                                                                                            Match 22.3%;
Local Similarity 95.9%;
                                                                                                                                                                                                                                                   TTAAGATTTGTGATAATAACAAGTACTGCAGTGGCACGCCGTGTGGTTCTCCACTTTGAA 312
                CTG-AGCGTG-ATTCTGGGGAATCTG 516
                                                                                                                 GACGTTCTTTTGGACCAACATCGTCTTCTTGGACCTTAGTGGAGTGGGAGTATGCTCTAGA
                                                                                                                                                                                          ACCCCCATTACTGTGACCCTGTTATATGATTTAGCTACACAGCAAGTGGACTCTGAGGT 372
                                                                                                                                                                                                                                     TTAAGATTTGTGATAATAACAAGTACTGCAGTGGCACCCCGTGTGGTTCTCCACTTTGAA 989
CTGTAGCGTGCATTCTGGGCAACCTG
                                                       GAAGCAGCAGCCCATGCACTGAAGTATTGGGGCACCCGGCTGGGAGAAGAATGGGTTTTC
                                                                                 GAAGCAGCAGCCCATGCACTGAAGTAGTGGGGCACCGGGCTCGTAGAAGAATGGGGTTTC
                                                                                                                                               GACGTTCTTTTGGACCAACATCGTCTTCTTGGACCTTAGTGGAGTGGGATATGCTCTAGA 432
                                                                                                                                                                            ACCCCCCATGACTGTGACCCTGTTATATGATTTAGCTACACAGCAAGTGGACTCTGAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This clone is available royalty-free through LLNL; IMAGE Consortium (info@image.llnl.gov) for further Seq primer: -40ml3 fwd. ET from Amersham High quality sequence stop: 316.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4444 Forest Park Parkway, Bo
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Theising, B., White, Y., Wylie, T., Waterston, R. WashU-NCI human EST Project Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Wilson RK
Washington University
                                                                                                                                                                                                                                                                                                                                                                        156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                        œ
                                                                                                                                                                                                                                                                                                                                                                   /dev_stage="20 week-post conception fetus"
/lab_host="DH10B (ampicillin resistant)"
98 c 127 g 138 t
                                                                                                                                                                                                                                                                                                                                                                                                                 /sex-"male"
                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib="Soares fetal liver
                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:9606"
/clone="453381"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                            Score 234; DB 31;
Pred. No. 0.00e+00;
0; Mismatches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     School of Medicine way, Box 8501, St. J
783
                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                               spleen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Louis,
                                                                                                                                                                                                                                                                                                                          Length 519;
                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LLNL ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 information.
                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            contact the
                                                                                                                                                                                                                                                                                              Gaps
                                                                                   492
                                                                                                                 869
                                                                                                                                                                          929
                                                                                                                                                                                                                                                                                              Ŋ
```

* * * *		***
* * * * *		****
***		****
*		* * *
****		****
*		* * *
*****		******
* * * * * * * * * * * * * * * * * * * *		*****
*	Z-/	* * *
如果有有效的现在分词 有有的的 医克勒特氏 医克勒特氏 医克勒特氏 医克勒特氏 医克勒特氏 医克勒特氏 医克勒特氏 医克勒氏病 医克勒氏病 医克勒氏病 医克勒氏病 医克勒氏病 计记录器 计记录器 计记录器 计记录器 计记录器 计记录器 计记录器 计记录器		********************
* * * * * *		*****
* * * *	'	****
***	(TM)	****

Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm

Tabular output not generated. Run on: Wed May 6 08:50:59 1998; MasPar time 8.51 Seconds 449.440 Million cell updates/sec

Title:

Sequence: Description: Perfect Score: >US-08-804-166-2 (1-256) from US08804166.pep 1994 1 SRTSLLLAFGLLCLPWLQEG......GFKVENHTGCHCSTCYYHKS 256

Scoring table: PAM 150 Gap 11

Searched: 120837 seqs, 14945562 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database:

a-geneseq31
1:part1 2:part2 3:part3 4:part4 5:part5 6:part5 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26

Statistics: Mean 31.442; Variance 119.617; scale 0.263

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

11000000000000000000000000000000000000	Result
1994 1321 1221 11224 11124 11124 11124 11124 11124 11124 11124 11124 11124 11124 11124 11124 11124 11124 11124 11124	Score
100 0 683 664 7 7 56 64 64 64 7 7 56 64 64 64 64 64 64 64 64 64 64 64 64 64	Query Match Length
225 3085 3085 3085 309 11961 455 455 455 988 455	
1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	BB
W33359 W33358 W33358 W33358 R207496 R27496 R70108 R70107 R71087 R750787 R750787 R70108	Ð
TBP(20-161)/hCG-alpha TBP(20-190)/hCG-beta TBP(20-190)/hCG-beta TBP(20-190)/hCG-beta TBP(20-190)/hCG-beta TBP(20-190)/hCG-beta TBP(20-190)/hCG-beta TBP(20-190)/hCG-beta TRF - alpha 50 TNF - alpha 50 fusion TNF-R-GBP 130 fusion TNF-alpha binding pro p55 TNF-R. Human Tumour Necrosis Human 55kD TNF-bindin TNF-alpha 55kD Tecept TNF-alpha 55kD recept TNF-alpha 130 fusion TNF-R-GBP 130 fusion	Description
1.90e-207 1.41e-170 5.44e-128 1.46e-128 6.19e-110	Pred. No.

밁 Š 밁

61 tdcrecesysftasenhlrhclscskcrkemgqveissctvdrdtvcgcrknqyrhywse 120

Query Match 100.0%; Best Local Similarity 100.0%; Matches 256; Conservative

Score 1994; DB 26; Length 256; Pred. No. 1.90e-207; 0; Mismatches 0; Indels 0

Indels 0;

Gaps

0

45	44	43	42	41	40	39	38	37	36	ω 5	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20
667	667	667	667	667	667	667	667	667	667	667	667	667	667	667	672	788	800	996	1110	1118	1118	1118	1118	1124	1124
ω	ω	ω	Ψ	Ψ	ω	33.5	ω	ω	ω	·	ω	Ψ	ω	Ψ	ω	9	0	٥	5	σ,	σ,				6
265																					55		33	604	5
15	15	15	15	5	5	15	5	15	15	19	N	26	ω	Ľ	ω	N	4	4	ω	æ	œ	œ	œ	13	3
R86247	R86251	R86253	R86248	R86249	R86254	R86250	R86255	R86256	R86268	R99417	R10095	W31665	R15195	P92146	R15182	R07450	R24081	œ	R12550	φ	R51034	R51033	ω	R70105	R/OLO6
chain	ingle chain	ingle chain	le chain	ingle chain	ingle chain	le chain	ingle chain	gle cha	Partially deglycosyla	ycoprot	Engineered human alph	Secreted protein huma	sut	Beta subunit of urina	pha subuni	r Z	TNF-alpha	ated TNF-alpha	e I TNF recepto	p55 Tumour necrosis f	p55 tumour	Mutant p55 tumour nec	Mutant p55 tumour nec	-R-EBA 175 fusic	TNF-R-PL. vivax Dufty
.10e-	. 10e-	.10e-	.10e-	.10e-	.10e-	2.10e-59	.10e-	.10e-	.10e-	.10e-	.10e-	.10e-	.10e-	.10e-	.96e-	.08e-	.13e-	.06e-	.24e-10	.88e-10	.88e-10	.88e-	.88e-10	.19e-	TAG-TT

# ALIGNMENTS

```
Š
                                                   밁
                                                                                               å
                                                                                                                                                      밁
                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hybrid dimeric protein comprising two co-expressed units - each probased on receptor or ligand and a subunit of a heterodimeric hormone, especially FSH, for inducing follicular maturation PS Example; Pages 37-38; 60pp; English.

CA novel fusion protein comprises 2 dimer forming co-expressed amino call sequences, each consisting of a homodimeric or heterodimeric correceptor chain or ligand, with ligand-receptor binding activity, consisting of a homodimeric protein hormone receptor binding activity, consisting of a subunit of a bound directly or via a peptide linker to a subunit of a cheterodimeric protein hormone capable of forming a heterodimer with the hormone's other subunits. The fusion protein, e.g. the chrombopoietin (TPO)/human chorionic gonadotrophin-alpha subunit conforming in the fusion protein denoted by the present sequence, component, reducing the requirement for hormone itself and the component, reducing the requirement for hormone itself and the component control injections needed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-FEB-1997; U02315.
20-FEB-1996; US-011936.
(ISTF ) ARS APPLIED RES S)
Campbell RK, Chappel SC, Campbel SC, Campb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           W33359 standard; 1
W33359;
W33359;
19-MAR-1998 (firs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-MAR-1998 (first entry)
19-MAR-1998 (first entry)
TBP(20-190)/hCG-alpha fusion protein.
PHASION protein; TPO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
WO9730161-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fusion protein; thrombope alpha subunit; hCG-alpha.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; T94021
                                                                                                    165
                                                                                                                                                        181
  212
                                                 241
                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1-AUG-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                         1 srtslllafgllclpwlqegsadsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqd
                     lvqknvtsestccvaksynrvtvmggfkvenhtachcstcyyhks
                                                                                                                                                                                                                             nlfqcfnctlclngtvhlscqekqntvctchagfflrenecvscsnckkslectklslpq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 enhtgchcstcyyhks
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nlfqcfncslclngtvhlscqekqntvctchagfflrenecvscagaapgcpectlqenp
                                                                                                                     lenvkgtedsgttagaapgcpectlqenpffsqpgapilqcmgccfsrayptplrskktm
                                                                                                                                                                                                    NLFQCFNCSLCLNGTVHLSCQEKQNTVCTCHAGFFLRENECVSC----
                                                                                                                                                                                                                                                                                                      TDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSE
                                                                                                                                                                                                                                                                                                                                  tdcrecesgsftasenhlrhclscskcrkemgqveissctvdrdtvcgcrknqyrhywse
                                                                                                                                                                                                                                                                                                                                                                                                           SRTSLLLAFGLLCLPWLQEGSADSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSYNRVTVMGGFKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ffsqpgapilqcmgccfsrayptplrskktmlvqknvtsestccvaksynrvtvmggfkv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NLFQCFNCSLCLNGTVHLSCQEKQNTVCTCHAGFFLRENECVSCAGAAPGCPECTLQENP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 h 83.6%;
Similarity 89.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein;
                                                                                            AGAAPGCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SYSTEMS F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 1667; DB 26;
Pred. No. 1.11e-170;
2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               À
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HOLDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       chorionic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels 29;
                                           285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gonadotrophin;
                                                                                                                                                                                                       -----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                240
                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                               211
                                                                                                                                                                                                    164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŗ
```

```
FIRE SULTANT STATE OF THE SULTANT SULT
            RESULT RESULT ACCORDING TO THE PROPERTY OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                    S Homo sapiens.

N W09730.161-A1.

D 21-UGC1997.

P 20-FEB-1997; U02315.

R 20-FEB-1996; US-011936.

Campbell RK, Chappel SC, Jameson BA;

Campbell RK, Chappel SC, Jameson BA;

N WPI; 97-425036/39.

N WPI; 97-425036/39.

N PSDB; T94022.

N PSDB; T94021.

N PSDB; T94021.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DR N-5DB; 794000.

Pr Hybrid dimeric protein comprising two co-expressed units - each pri tybrid dimeric protein comprising two co-expressed units - each pri based on receptor or ligand and a subunit of a heterodimeric hormone, especially FSH, for inducing follicular maturation are receptor to the protein comprises 2 dimer forming co-expressed amino a novel fusion protein comprises 2 dimer forming co-expressed amino acid sequences, each consisting of a homodimeric or heterodimeric receptor chain or ligand, with ligand-receptor binding activity, componed directly or via a peptide linker to a subunit of a heterodimeric protein hormone capable of forming a heterodimer with the hormone's other subunits. The fusion protein, e.g. the thrombopoietin (TPO)/human chorionic gonadotrophin-beta subunit (hGG-beta) fusion protein denoted by the present sequence, significantly increases the biological activity of the hormone component, reducing the requirement for hormone itself and the sequence 307 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21-AUG-1997.
20-FEB-1997; U02315.
20-FEB-1996; US-011936.
20-FEB-1996; US-011936.
(ISTF ) ARS APPLIED RES SY
Campbell RK, Chappel SC, J
WPI; 97-455036/39.
            hormone,
Example;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   W33360;
19-MAR-1998 (first entry)
TBP(20-190)/hCG-beta fusion
Fusion protein; thrombopolet
beta subunit; hCG-beta.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TBP(20-161)/hCG-beta fusion protrusion protein; thrombopoietin; beta subunit; hCG-beta.

Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      W33358 standard; Protein; W33358; 19-MAR-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W33360 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W09730161-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>, .</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 srtslllafgllclpwlqegsadsvcpqgkylhpqnnsicctkchkgtylyndcpgpgqd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TDCRECESGSTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tdcrecesgsftasenhlrhclscskcrkemgqveissctvdrdtvcgcrknqyrhywse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SRTSLLLAFGLLCLPWLQEGSADSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66.2%;
Similarity 98.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
            39-40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -beta fusion protein.
thrombopoietin; TPO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
279..1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Protein;
60pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SYSTEMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Jameson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein.
stin; TPO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 1321; DB 26;
Pred. No. 6.46e-132;
            English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HOLDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human chorionic gonadotrophin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human chorionic gonadotrophin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                               pharmacokinetic properties of for treating e.g. The and IL-1 mediated diseases, e.g. adult respiratory distress syndrome, rheumatoid arthritis, septic shock etc.

Track this sequence shows a native 30 kb TNF inhibitor which may be modified to contain at least one non-native cysteine residue, pref. at positions 1, 14, 105, 111 and/or 165. The non-native cysteine is joined to a non-peptidic polymer, pref. monomethoxy PEG via thio-ether bonds. Two such TNF inhibitor mols. may be linked via this non-peptidic spacer. The modified polypeptides show improved pharmokinetic properties, i.e. increased mol. wt. hence reduced pharmokinetic properties, i.e. increased mol wt. hence reduced sol. of native TNF inhibitors, and reduced antigenicity. The polypeptides may be used for treatment of TNF mediated diseases such
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
     Matches
                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (SYND) SYNERGEN INC.
(SYND) SYNERGEN INC.
Armes LG, Brewer MT, Evans RJ, Kohno T, Thompson RC;
AFF, 92-348933/42.

New ethylene glycolated polypeptide(s) with improved
New ethylene glycolated polypeptide(s) with improved in the i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A novel fusion protein comprises 2 dimer forming co-expressed amino acid sequences, each consisting of a homodimeric or heterodimeric receptor chain or ligand, with ligand-receptor binding activity, bound directly or via a peptide linker to a subunit of a heterodimeric protein hormone capable of forming a heterodimer with the hormone's other subunits. The fusion protein, e.g. the thrombopoietin (TPO)/human chorionic gonadotrophin-beta subunit (hCG-beta) fusion protein denoted by the present sequence, significantly increases the biological activity of the hormone number of injections needed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-OCT-1992.
13-MAR-1992; U02122.
15-MAR-1991; US-669862.
17-JAN-1992; US-822296.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tumour necrosis factor; ethylene glycol; pharmokinetic; adult respiratory distress syndrome; rheumatoid arthrit septic shock; pulmonary fibrosis; spacer.
                                                                                                                                                                  as adult respiratory distress syndrome, pulmonary fibrosis, rheumatoid arthritis,inflammatory bowel disease and septic shock. The same method may be applied to the interleukin-1 receptor antagonist
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
W09216221-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R27496 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Native 30 kD TNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-MAR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nlfqcfncslclngtvhlscqekqntvctchagfflrenecvscs 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      srtslllafgllclpwlqegsadsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NLFQCFNCSLCLNGTVHLSCQEKQNTVCTCHAGFFLRENECVSCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tdcrecesgsftasenhlrhclscskcrkemgqveissctvdrdtvcgcrknqyrhywse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SRTSLLLAFGLLCLPWLQEGSADSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   l Similarity
164; Conser
        142;
                                Similarity
                                                                                                                   161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A.
                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64.78;
99.48;
                             56.4%;
                                                                                                                                          See also R27495.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 1291; DB 26;
Pred. No. 1.46e-128;
1; Mismatches 0;
Score 1124; DB 5; I
Pred. No. 6.19e-110;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                        Length 161;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0.
  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

밁

1 dsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhcl

Chimeric

```
RESULT RIDER RESULT RIDER TO THE TOTAL RIGHT RIGHT RESULT 
                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ρy
                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-OCT-1991; GO1826.
18-OCT-1990; GB-022648.
(CHAR-) CCHARING CROSS SU
Brennan FM, Feldmann M,
WPI; 92-167156/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      treating autoimmune disease, septic shock, HIV etc.

Example: Fig 7; 43pp; English.

This sequence is a truncated TNF-alpha receptor derivative, as en in pTNFRecd. This was produced as described in Q24440.

This derivative lacks the 81 carboxyl terminal residues of the cytoplasmic domain. The derivative could be used in the regulation of TNF-alpha mediated responses by binding and sequestering human TNF-alpha e.g. in the treatment of pulmonary diseases, septic shock, HIV infection, malaria, viral meningitis, and the treatment of pulmonary diseases, septic shock, HIV infection, malaria, viral meningitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Truncated TNF-alpha 55kD receptor.

tumour necrosis factor alpha; extracellular binding domain; treatment; pulmonary diseases; septic shock; HIV infection; malaria; viral meningits; graft versus host disease; autoimmune disease; rheumatoid arthritis.
                     10-NOV-1995 (first entry)
TNF-R-GBPH fusion protein.
TNF-R-GBPH fusion protein.
Hybrid peptide; malaria parasite; Plasmodium falciparum; fusion protein blood cell; cytokine receptor; glycophorin binding peptide 130 GBP 130; GBPH; glycophorin binding peptide homologue; glycophorin tumour necrosis factor receptor; TNF-R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens. WO9207076-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R24080;
05-NOV-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         T 6
R24080 standard;
                                                                                                                                                                        R70108;
                                                                                                                                                                                                    R70108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     See also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       graft versus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; Q24441.
New polypeptide capable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-APR-1992.
                                                                                                                                                                                                                                                                                                      143
                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                  161
                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                kqntvctchagfflrenecvscs 183
                                                                                                                                                                                                                                                                                                                                                                                                    kqntvctchagfflrenecvscs 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            three cysteine-rich subdomains
                                                                                                                                                                                               standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q24440-51,
199 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         56.4%;
larity 99.3%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         host disease and autoimmune
                                                                                                                                                                                               Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R24000, R24080-84, R27585, Q29236-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Z,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUNLEY RES CENT.
M, Gray PW, Turner MJC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of binding human TNF alpha - comprises ch subdomains of TNF alpha receptor for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 1124; DB 4; Pred. No. 6.19e-110; 1; Mismatches 0;
                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         diseases,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 199;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         esp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rheumatoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                         n protein;
130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    encoded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

```
RESULT RESULT AND ACCOUNTS OF THE PROPERTY OF 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           무
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PT New hybrid peptide(s) for binding cytokine(s) - comprising a malaria parasite peptide capable of binding a red blood cell and PT a receptor peptide.

CC Hybrid peptides for binding cytokines, comprising a malaria parasite (Plasmodium falciparum) peptide (capable of binding to a red blood CC cell (RBC)) and a receptor peptide are claimed. R70103-25 are examples CC of these hybrid peptides. R70108 is a fusion of tumour necrosis factor CC receptor (in accordance with H Loetscher et al. Cell, Vol. 61, 351-359) CC and glycophorin binding protein (GBP) homologue (GBPH). The CC cytokine receptors not normally found on RBCs means that the CC cytokine receptors not normally found on RBCs means that the CC cytokine can bind harmlessly to the RBC without deleterious effect. CC The RBC protects the hybrid peptides from excretion from the kidney, and CC another cell. GBP 130 or GBPH are the prefd. malaria parasite peptides CC used, others include EBA 175 (175 kDa erythrocyte binding to a receptor in CC considered by Plasmodium vivax). These peptides bind to CC pref. Glycophorin A, B and C, slalo glycoproteins, found on the surface cytokines in the circulation to reduce pathological damage.

Seemance 310 dam ecirculation to reduce pathological damage.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                       NT 8
R07449 standard;
R07449;
                                                                                                                                                                                                                                                                                                                           29-JAN-1991 (first entry)
Tumour Necrosis Factor-Binding Protein from pTNF-BP15 cDNA.
Tumour necrosis factor binding protein; TNF-BP; TNF-receptor;
pTNF-BP15; infectious disease; parasitic disease; cachexia;
                                                                                                                                                                                                                       EP-393438-A.
24-OCT-1990.
                                                                                                                                                                                                                                                                                   Homo
                                                                            21-APR-1989; DE-913101.
21-JUN-1989; DE-920282.
(BOEH ) BOEHRINGER INGELHEIMINT.
Hauptmann R, Himmler A, Maurer-Fogy
                                                                                                                                                                                                 06-APR-1990;
                                                                                                                                                                                                                                                                                                          autoimmune disease; shock.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Prendergast KF;
WPI; 95-115452/15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (PREN/) PRENDERGAST K F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20
  encoding
                                                        90-321987/43.
                                                                                                                                                                                                                                                                                sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dsvcpqgky1hpqnns1cctkchkgty1yndcpgpgqdtdcrecesgsftasenh1rhc1 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KQNTVCTCHAGFFLRENECVSCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     kqntvctchagfflrenecvscs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             56.4%;
Similarity 99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Plasmodium falciparum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               309 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; G01900.
; GB-018350.
; GB-017021.
TNF binding protein and TNF- receptor -
                                                                                                                                                                                                 106624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers 230..269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "can
number"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 þe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1124; DB 13;
Pred. No. 6.19e-110;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeated n times, where n
                                                                               Ļ,
                                                                                  Stratowa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
  used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                              PT New hybrid peptide(s) for binding cytokine(s) - comprising a malaria parasite peptide.

PT malaria parasite peptide capable of binding a red blood cell and primary peptide.

Example A; Page 53-54; 93pp; English.

PS Example A; Page 53-54; 93pp; English.

CC (Plasmodlum falciparum) peptide (capable of binding to a red blood CC (Plasmodlum falciparum) peptide are claimed. R70103-25 are examples CC (Plasmodlum falciparum) peptide are claimed. R70103-25 are examples CC enli (RBC)) and a receptor peptide are claimed. R70103-25 are examples CC of these hybrid peptides. R70107 is a fusion of tumour necrosis factor CC receptor (in accordance with H Loetscher et al Cell. Vol. 61, 351-359) CC and glycophorin binding protein (GBP) 130. The use of cytokine can bind CC and protein binding protein (GBP) 130. The use of cytokine can bind charmlessly to the RBC without deleterious effect. The RBC protects the Cybrid peptides from excretion from the kidney, and due to steric CC hindrance prevents the cytokines binding to a receptor in another cell. CC GBP 130 or GBPH (GBP homologue) are the prefd. malaria parasite peptides used, others include EBA 175 (175 kDa arythrocyte binding antigen), CC receptor molecule (eg. exhibited by plasmodium vivax). These peptides CC bind to pref. glycophorin A, B and C, sialo glycophoriens, found on CC the levels of free cytokines in the circulation to reduce pathological damage.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  red blood
GBP 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Fig 1(1-3); 5lpp; German.

Clone pTNF-BP15 was used to contruct pADTNF-BP, for transfection of e.g. COS7 cells. The expressed proteins are useful prophylactically and therapeutically to control disorders which involve the damaging effects of TNF-alpha or -beta (e.g. infectious or parasitic diseases, shock, cachexia, autoimmune diseases, adult respiratory distress syndrome etc., or side effects of treatment with TNG-alpha). They can also be used as diagnostic reagents for assaying TNF and in study of TNF-receptor interactions.

See also Q06282-Q06285.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-SEP-1994; G01900.
03-SEP-1993; GB-018350.
23-AUG-1994; GB-017021.
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Prendergast KF;
WPI; 95-115452/15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TNF-R-GBP 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      T 9
R70107 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tumour treatment and to understand mechanismsm Disclosure; Fig 1(1-3); Sipp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-MAR-1995.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (PREN/) PRENDERGAST K F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-NOV-1995 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         kqntvctchagfflrenecvscs 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  dsvcpqgkylhpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhcl 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   scskcrkemgqveissctvdrdtvcgcrkngyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KONTYCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              d peptide; malaria parasite; Plasmodium falciparum; fusion protein;
lood cell; cytokine receptor; glycophorin binding peptide 130;
30; GBPH; glycophorin binding peptide homologue; glycophorin A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    h 56.4%;
Similarity 99.3%;
142; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
Plasmodium fa
    451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          fusion protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
  ₽
K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         falciparum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1124; DB 2; L
Pred. No. 6.19e-110;
Wiematches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ៩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TNF action
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

13;

160 82

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
    밁
                                           Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity Matches 142; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New fusion protein tumour necrosis factor and human interleukin-1 receptor - useful in therapy, diagnosis and assays of e.g. rheumatoid arthritis, diabetes, cerebral malaria, sepsis, etc. pisclosure; Page 57-59; 85pp; English.

The sequences given in R42058-59 repressent human tumour necrosis factor receptor (TNF-R) and the sequences in R42060-61 represent human interleukin-1 receptor (IL-IR). These sequences were used in the production of a fusion protein which conformed to one of the
                                                                                                                                                             The linker may comprise 5-100 amino acids selected from Gly, Asp, Ser, Thr and Ala. These linkers separate the individual moeities by such a distance that each component of the fusion protien is capable of folding into the secondary or tertiary structure required for its biological activity. These fusion proteins may be used in therapy, diagnosis and assays for conditions mediated by TNF or II-1, particularly in conditions in which both TNF and II-1 play a causitive role. They may be used to treat cachexia, rheumatoid arthritis, diabetes, multiple sclerosis, pulmonary fibrosis and silicosis, cerebral mediatia, allograft and xenograft rejection in graft verses host disease, sepsis, septic shock, inflammation, allergies and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; tumour necrosis factor receptor; TNF-R; interleukin-1 rece
IL-1R; fusion protein; linker; TNF; IL-1; cachexia; cerebral mala
rheumatoid arthritis; diabetes; multiple scierosis; septic shock;
pulmonary fibrosis; silicosis; allograft; xenograft; rejection;
graft verses host disease; sepsis; inflammation; allergy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R42059 standard;
R42059;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB; Q49932.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W09319777-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    autoimmune dysfunction
                                                                                                                                                                                                                                                                                                                                                                                                                                       formulae:
TNF-R-linker-TNF-R-linker-IL-1R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Smith CA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-MAR-1993; UO2938.
30-MAR-1992; US-860710.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14-OCT-1993.
26-MAR-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lambda derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-APR-1994
                                                                                                                                                  utoimmune
                                                                                                                                                                                                                                                                                                                                                                                                TNF-R-linker-TNF-R
                                                                                                                                                                                                                                                                                                                                                                                                                   IL-1R-linker-TNF-R-linker-TNF-R or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (IMMV ) IMMUNEX CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .ambda-gt10-7ctnfbp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     140
                                             Local Similarity hes 142; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
  41 dsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhcl 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93-336592/42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 kqntvctchagfflrenecvscs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     scskcrkemgqve1ssctvdrdtvcgcrknqyrhywsenlfqcfncs1clngtvh1scqe 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     dsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhcl 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KONTYCTCHAGFFLRENECYSCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                  dysfunctions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                             Conservative
                                                                                                                               Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TNF-R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "Signal peptide"
41 .455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Protein; 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99.38;
                                                                56.48;
99.38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Mature hTNF-R"
                                      Score 1124;
Pred. No. 6.
1; Mismatcl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. 6.19e-110;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              165
                                             Mismatches
                                           :19e-110;
:ches 0;
                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NF-K; interleukin-l receptor;
cachexia; cerebral malaria;
                                                                                    8
                                                                                  Length 455;
                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
RESULT
AC ROAD
AC TILL
                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-JUL-1989;
11-DEC-1989;
07-FEB-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and beta, useful as therapeutic agent.

Disclosure; Fig 21; 142pp; English.

The sequence comprises the entire 30 kD TNF inhibitor. The clone from which the sequence was deduced was isolated from a cDNA library prepd. from RNA form U937 cells treated with PMA/PHA.

The whole gene can be inserted into expression vectors for prepn of TNF inhibitor for use in the treatment of inflammatory and
                                                                                                                    rumour necrosis
extracellular do
                                                                                                                                                                                                        R20787
R20787;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 91-073847/11.
N-PSDB; Q10883.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R10986;
13-MAY-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         T 11
R10986 standard; Protein;
                     peptide
                                                                                                                                            TNF-alpha binding protein.
Tumour necrosis factor alpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   degenerative diseases. The See also R10984 and R11001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tumour necrosis factor inhibitor -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-JUL-1989; US-381080.
11-DEC-1989; US-450329.
07-FEB-1990; US-479661.
(SYNE-) SYNERGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24-JAN-1991.
16-JUL-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cleavage_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tumour necrosis factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30kD TNF inhibitor precursor.
                                                              peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AU9058976-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                       Homo sapiens.
                                                                                                                                                                                         1-MAY-1992
                                                                                                                                                                                                                                                                                                                143
                                                                                                                                                                                                                                                                                                                                                       161
                                                                                                                                                                                                                                                                                                                                                                                                                                    101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101
                                                                                                                                                                                                                                                                                                                                                                                              83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           kqntvctchagfflrenecvscs 183
                                                                                                                                                                                                                                                                                                                                                kqntvctchagfflrenecvscs
                                                                                                                                                                                                                                                                                                                                                                                                                   scskcrkemgqve1ssctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCFGFGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   dsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhcl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                KONTVCTCHAGFFLRENECVSCA
                                                                                                                                                                                                                                                                                                                                                                                                SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                142;
                                                                                                                                                                                                                              standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 99.3%, 142; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  455 AA;
                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           058976
                                                                                                                               domain.
                   /note= "signal peptide"
                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note=" cleavage gives active protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40..4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
  /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 56.4%;
  "mature peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          inhibitor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The active protein is claimed (Claim
                                                                                                                                                                                                                              455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1124; DB 2;
Pred. No. 6.19e-110;
                                                                                                                                                                                                                                                                                                                165
                                                                                                                                                                                                                                                                                                                                                     183
                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                autoimmune diseases;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          for suppression of TNF-alpha
```

Length 455; Indels

8

0

Gaps 100

0

```
TRESOLT RESOLUTION OF THE PROPERTY OF THE PROP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SCCCCCCC PPT TRACT CONTRICT TO THE TOTAL THE T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 142; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               e.g. rheumatoid arthritis

Disclosure; Fig 1; 25pp; English.

The amino acid sequence is that of tumour necrosis factor alpha
binding protein which contains the extracellular domain of human TNF
alpha receptor. It is soluble and can be used in the regulation of
TNF-mediated responses by binding and sequestering the cytokine. It
can therefore be used therapeutically to treat disorders such as
cachexia, sepsis and autoimmune diseases, specifically rheumatoid
                                                   misc_difference 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-JUN-1990; GB-013410.
(CHAR-) CHARING CROSS SUNLE.
Feldman M, Gray P, Turner M, Brennan
                                                                                                                                                                                                                                                                                                                                                                                                                    modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           epidermal growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R75084 standard;
R75084;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          domain
                                                                                                                                           misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New tumour necrosis factor alpha binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-JUN-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       horbol myristate acetate;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     161 kqntvctchagfflrenecvscs 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              useful in treating cachexia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tumour necrosis factor receptor; TNF-R; human; murine; chimera; ermal growth factor receptor; EGF-R; protease; inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         dsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhcl 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 scskcrkemgqveissctvdrdtvcgcrkngyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KONTYCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92-043613/06.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        455 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    013410
/note=
203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "
151..153
                                                                                                                                                                                                             /note=
198..21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note= "N terminus of 54..56
                                                                                                                                           201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               145..147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30..199
/note= "extracellular domain"
212..234
                                                                                                                                                                                                                                                                                   193..210
                                                                                                                                                                                                                                                                                                                                                     /note= "glycosylation 161..163
                                                                                                                                                                                                                                                                                                                                                                                                                        145..147
                                                                                                                                                                                                                                                                                                                 /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "glycosylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       factor receptor;
e acetate; PMA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 56.4%;
99.3%;
                                                                                                                                                                                                                 . 210
                                                                                                                                                                                                                                           "peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "potential N-glycosylation site"
                             "essential
                                                                                               "major C terminus for soluble p55 TNF-R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "potential N-glycosylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "transmembrane
                                                                                                                                                                                                                                                                                                                 "glycosylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 1124; DB 4; I
Pred. No. 6.19e-110;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ⋛
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ha binding protein and polypeptide sepsis and auto immune diseases
                                                                                                                                                                         region
                                                                                                                                                                                                                                           used in
                             for shedding reaction"
                                                                                                                                                                                                                                                                                                                                                                                   site*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               soluble
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   domain'
                                                                                                                                                                                                                                                                                                                                                                                                                                                         site"
                                                                                                                                                                                                                                           creation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           p55 TNF-R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 455;
                                                                                                                                                                                                                                           of chimeras"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
RESULT
IDEA
RESULT
RESU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CC This sequence represents human p55 tumour necrosis factor (TNF-R).

CC Expression of this receptor is regulated by shedding of the extracellular CC inducing agents, e.g. phorbol myristate acetate (PMA), depending on cell ctype. The only region of the receptor whose structure affects the CC shedding response is the spacer region (see R75012) in the extracellular CC domain. This region is located close to a site of cleavage of the CC molecule, and links the Cys rich module to the transmembrane domain. The spacer region was used to create the chimeras CC between human p55 TNF-R and murine epidermal growth factor receptor CC (EGF-R) that are represented by R75007-11. This spacer region was CC subjected to deletion mutations (R75013-25) and substitutions CC (R75026-47). Of the spacer region, the most important residues are CC (R75026-47). Of the spacer region, the most important residues are conformation of these residues, with the exception of a limited CC enformation of the protein adversely effect the shedding process. CC inhibitor of a protease that is capable of cleaving the soluble TNF-R CC inm the cell bound TNF-R. Fragments of these inhibitors can be seen in CC conformation of the protein soluble of cleaving the soluble TNF-R CC from the cell bound TNF-R. Fragments of these inhibitors can be seen in CC consense of the shedding TNF function.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (YEDA ) YEDA RES & DEV
Batkin M, Brakeh
                   24-OCT-1990.

06-APR-1990; 106624.

21-APR-1989; DE-913101.

21-JUN 1989; DE-920282.

(BOEH ) BOEHRINGER INCELHEIMINT.
                                                                                                                                                                                                                                                                                                                                                                                                                                  ET 14
R07451
                                                                                                                                                                                                                                               Human Tumour Necrosis Factor-Receptor from lambdaINF-R2 cDNA insert. Tumour necrosis factor binding protein; INF-BP; INF-receptor; Infectious disease; parasitic disease; cachexia; autoimmune disease; shock; lambdaINF-R2; raINF-R8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antagonising deleterious effects of TNF. Disclosure; Fig 1; 40pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New protease capable of cleaving soluble tumour necrosis factor (TNF) receptor - from cell-bound TNF- receptor, useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 95-194342/26.
N-PSDB; Q90513.
                                                                                                                                                                                         EP-393438-A.
                                                                                                                                                                                                                  Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                     29-JAN-1991 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-OCT-1994;
12-OCT-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AU9475742-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           143 KQNTVCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               kgntvctchagfflrenecvscs 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                  standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              l Similarity 99.3%, 142; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Brakebusch C,
      Himmler
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "minor C terminus for soluble p55 TNF-R" 212..234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note-
                                                                                                                                                                                                                                                                                                                                                                                                                               protein; 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           56.4%;
99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ဗ
   Maurer-Fogy I,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Varfolomeev E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 1124; DB 14;
Pred. No. 6.19e-110;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                     A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wallach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
RESULT RESULT AND RESULT RESUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA encoding TNF binding protein and TNF- receptor - used in tumour treatment and to understand mechanismsm to TNF action bisclosure; Fig 91(1-2); 51pp; German.

CraTNF-R8 (Q06284) was used to screen the HS913T cDNA library.

C LambdaTNF-R2 encodes the complete human TNF-R2 and was used to construct a plasmid (pADTNF-R) expressing the product the same way as pADTNF-BP (see Q06282). The expressing the product the same way prophylactically and therapeutically occurred disorders which involve the damaging effects of TNF-alpha or -beta (e.g. infectious or parasitic diseases, shock, cachexia, autoimmune diseases, adult respiratory distress syndrome etc., or side effects of treatment with assaying TNF and in study of TNF-receptor interactions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ULT 15
R11082 standard; F
R11082;
                                                                                                                                                                                                                                                                                           20-MAR-1991.
31-AUG-1990; 116707.
12-SEP-1989; CH-003319.
08-MAR-1990; CH-000746.
20-APR-1990; CH-001347.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 90-321987/
N-PSDB; Q06285.
DNA encoding TN
                                                                                                                                                                                             (HOFF ) HOFFMANN-LA F
Brockhaus M, Dembic Z
Schlaeger EJ;
WPI; 91-081851/12.
prodn.
Claim 1; Fig 1; 26pp; German.
Partial amino acid sequences were determined for
TNF-BPs (see R11072-R11081) and oligonucleotide
synthesised based on these partial sequences. Th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                кеу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human 55kD TNF-binding protein.
Tumour Necrosis Factor; binding proteins; septic shock;
autoimmune glomerulonephritis; lymphokine; cytokine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       modified_site
                                                                                                                                                 N-PSDB; Q10955.
Insoluble tumour necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-MAY-1991
                                                                                                                                                                                                                                                                                                                                                                                                                   EP-417563-A.
                                                                                                                        encoding them,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      dsvcpqgky1hpqnns1cctkchkgtylyndcpgpgqdtdcrecesgsftasenh1rhc1 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           kqntvctchagfflrenecvscs 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KONTVCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        455 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                             useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /label=
212..230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /label=
151
                                                                                                                                                                                                                                                                                                                                                                                                                                       /label= signal peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /label-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protein; 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'label-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              56.48;
99.38;
                                                                                                                                                                                                                                              ROCHE
Z, Gen
                                                                                                                           'n
                                                                                                                                                                                                                                            CHE AG.
Gentz R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      transmembrane region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                putative N-glycosylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            putative N-glycosylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  putative N-glycosylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 putative N-glycosylation
                                                                                                                           s factor binding proteins - pharmaceutical prods. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score
Pred.
1; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₹
                                                                                                                                                                                                                                              Lesslauer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1124; DB 2;
No. 6.19e-110;
       sequences. The
                                                                                                                                                                                                                                              Ę
                                                      for the 55 and 75kD
                                                                                                                                                                                                                                              Lotscher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 site
                                                                                                                                                   ı
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
       primers were used
                                                                                                                           for a
                                                                                                                                                                                                                                              Ή
                                                                                                                           d DNA
antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
```

```
Search completed: Wed Job time: 114 secs.
                                            Ş
                                                                   밁
                                                                                        ğ
                                                                                                                밁
                                                                                                                                      Ş
                                                                                                                                                              밁
                                                                                                                                                                                                                                     ននននននន
                                                                                                                                                                                                 Query Match
Best Local :
                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                to produce a cDNA fragment for use as aprobe to screen a human placental cDNA bank constructed in lambda gtil. Positive clones we identifed and sequenced. DNA constructs comprising the TNF-BP cod sequence may also contain a fragment encoding a human Ig domain. Recombinant constructs are used to transform cells to confer improved TNF-binding properties.

See also Q10956.
Sequence 455 AA;
                                             143
                                                                   161
                                                                                                                101
                                                                                                                                      83
                                                                                        KQNTVCTCHAGFFLRENECVSCA
                                                                   kqntvctchagfflrenecvscs 183
                                                                                                                                                                                      142;
                                                                                                                                                                                                  Similarity
                                                                                                                                                                                      Conservative
         мау
                                                                                                                                                                                                56.4%;
99.3%;
           σ
           08:52:53
                                                                                                                                                                                                 Score 1124; DB 2;
Pred. No. 6.19e-110;
                                             165
            1998
                                                                                                                                                                                      Mismatches
                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                         screen a human
Positive clones were
ing the TNF-BP coding
                                                                                                                                                                                                            Length 455;
                                                                                                                                                                                      Indels
                                                                                                                                                                                      0
                                                                                                                                                                                      Gaps
                                                                                                                                                                                      0
```

THIS PAGE BLANK (USPTO)

* * *		***
*****		******
***		****
李老爷的事情,我们我们的我们的我们的我们的,我们的我们的我们的我们的我们的我们的我们的我们的我们的我们的我们的我们的我们的我		"*************************************
*******		******
******		******
******		******
****		*****
***	(TM)	***

Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Wed May 6 08:50:01 1998; MasPar time 11.89 Seconds 786.633 Million cell updates/sec

Tabular output not generated.

Description:
Perfect Score:
Sequence: Title: >US-08-804-166-2 (1-256) from US08804166.pep 1994

1 SRTSLLLAFGLLCLPWLQEG......GFKVENHTGCHCSTCYYHKS 256

Scoring table: PAM 150 Gap 11

Searched:

120446 seqs, 36531193 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database:

pir56 1:pir1 2:pir2 3:pir3 4:pir4 5:nr13d

Statistics: Mean 40.411; Variance 71.735; scale 0.563

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	σ	<sub>S</sub>	4	w	ผ	1	. NO.	Result
539	541	541	541	544	546	548	548	551	645	645	647	667	809	841	841	962	1098	1105	1114	1118	1124	1124	score	l
27.0	27.1	27.1	27.1	27.3	27.4	27.5		27.6			32.4	33.5	40.6	42.2	42.2		55.1	S	55.9		56.4	56.4	Match I	Query
120	120	120	96	120	96	120	120	120	85	85	86	116	461	454	454	461	140	139	142	160	455	158	Length L	
N	سو	-ر	N	_	N	1	<u></u>	N	U	v	Ç	_	Н	_	N	N	5	J	Çī	ÇI	1	S	DB	
G00021	TTMSA	UTPGA	PN0138	TTRTA	A05096	UTSHA	TTBOA	A39555	1HCNA	1XULA	1HRPA	TTHUAP	GQRTT1	GQMST1	<b>I57826</b>	JC4302	INCFA	1TNRR	1NCFB	1EXTA	GQHUT1	1EXTB	Ħ	
			glycoprotein hormones	Human chorionic gonad	chorionic gonadotropi	chorionic gonadotropi	0	tumor necrosis factor		tumor necrosis factor	tumor necrosis factor	tumor necrosis factor	Description											
3.47e-94	1.22e-94	1.22e-94	1.22e-94	2		3.12e-96	3.12e-96	6.48e-97	1.99e-118	1.99e-118	6.89e-119	1.71e-123	2.05e-156	7.05e-164	7.05e-164	3.26e-192	3.08e-224	6.85e-226	5.14e-228	5.83e-229	2.23e-230	2.23e-230	Pred. No.	

45	44	43	42	41	40	39	38	37	36	ဌ	34	33	32	32	30	29	28	27	26	25	24
212	214	221	225	228	231	440	446	447	448	451	474	476	478	500	500	500	501	503	507	537	53/
10.6	10.7	11.1			11.6			22.4		22.6			24.0							26.9	
474	349	326	325	38	435	117	114	108	114	119	117	97	93	118	118	118	96	120	118	120	T 20
N	N	μ	N	N	N	N	N	N	N	N	N	N	N	Ŋ	۲	N	_	N	N	N	٨
B38634	D36858	GQVZML	B43692	A60583	154182	I50992	I51230	A60627	B60627	I51229	A37198	S20287	S07091	A60626	UTCAA	S16762	TTHOA	S53062	A40554	I51241	A40080
tumor necrosis factor	gene G4R protein - va	T2 protein - myxoma v	T2 protein - rabbit f	glycoprotein hormones	-		gonadotropin alpha 2	glycoprotein hormones	_	gonadotropin alpha 1	glycoprotein hormones	lutropin alpha chain	glycoprotein hormones	glycoprotein hormones		gonadotropin alpha ch	glycoprotein hormones	glycoprotein hormones	glycoprotein hormones	pituitary glycoprotei	grycoprotein normones
.96e-	.37e-	.18e-			.52e-	7.08e-72	3.23e-73	1.93e-73	-	2.46e-74	1.71e-79		2.15e-80	2.37e-85	2.37e-85	2.37e-85	1.41e-85	4.97e-86	6.20e-87	ą	9.0/E-94

## ALIGNMENTS

RESULT

FEATURE 68-70 143-145 9-11,19-21 9-13-136,139-142 27-31,41-44 73-76,85-87 92-98,101-106 113-117,126-129 5-19	σ	#authors #journal #title	#journal #title REFERENCE	#authors Naismith, J. #submission submitted to #submission submitted to #cross-references PDB:1EXT REFERENCE TN056251 #authors Naismith, J. #journal J. Biol. Che #title Crystallogra tumor necr REFERENCE TN026252 #authors Rodseth, L.E	ENTRY TITLE PDB_TITLE ORGANISM #note
<pre>#region helix (right hand 3-10)\ #region beta sheet\ #region beta sheet\</pre>	receptor-human TWEDeta complex: implications for TWE receptor activation.  Resolution: 1.85 angstroms Determination: x-ray diffraction R-value: no refinement binding protein; cytokine; signalling protein	Janes, W.; Gentz, R.; Scicher, H.; Lesslauer, W. soluble human 55 kd TNF	f type i	Naismith, J.H.; Sprang, S.R. submitted to the Brookhaven Protein Data Bank, July 1996 nces PDB:1EXT TN026251 Naismith, J.H.; Devine, T.Q.; Brandhuber, B.J.; Sprang, S.R. J. Biol. Chem. (1995) 270:13303 Crystallographic evidence for dimerization of unliganded tumor necrosis factor receptor. TN026252 Rodseth, L.E.; Brandhuber, B.; Devine, T.Q.; Eck, M.J.; Hale,	tumor necrosis factor receptor extracellular domain, chain B extracellular domain of the 55kda tumor necrosis factor receptor. crystallized at ph3.7 in p 21 21 21.  #formal_name Homo sapiens #common_name man expressed in Escherichia coll. the construct contains residues 12 to 172 of the mature sequence of the entire receptor. residue 11 is mutated to met as a result of the expression system

```
RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CONTAINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        88-104
107-119
110-127
119-140
143-156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             45-60
63-78
66-86
    #cross-references
                                                            #journal
                                                                                                                                                                                                                                                                                                                                                                     #journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         146-152
                                                                                                                         #authors
                                                                                                                                                                                                                                                                                                          cross-references MUID: 90235284
                                                                                                                                                                                                                                                                                                                                                                                                               *authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #authors
                                                                                                                                                 ##residues 1-455 ##label LOE
##cross-references GB:M58286; GB:M33480; NID:g339753; PID:g339754
##experimental_source placenta
##note part of this sequence, including the amino end of the
##note mature protein, confirmed by protein sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                      ##residues 1-455 ##label FUC
##cross-references GB:M75864; GB:M75865; GB:M75866; NID:g339748;
PID:g339750
                                                                                                                                                                                                                                                              ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ##molecule_type DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           143 KONTVCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               122 KONTVCTCHAGFFLRENECVSCS 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                        A34900
Schall, T.J.; Lewis, M.; Koller, K.J.; Lee, A.; Rice, G.C.; Wong, G.H.W.; Gatanaga, T.; Granger, G.A.; Lentz, R.; Raai H.; Kohr, W.J.; Goeddel, D.V.
Cell (1990) 61:361-370
                                                                                                                                                                                                                                                                                                                           M.; Tabuchi, H.; Lesslauer, W.
Cell (1990) 61:351-359
Molecular cloning and expression
necrosis factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fuchs, P.; Strehl, S.; Dworzak, M.; Himmler, A.; Ambros, Genomics (1992) 13:219-224
Structure of the human TNF receptor 1 (p60) gene (TNRF1) localization to chromosome 12p13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tumor necrosis factor receptor type 1 precursor - humanALTERNATE_NAMES
tumor necrosis factor alpha inhibitor; tumor necrosis factor
binding protein 1 (TNF blocking tumor necrosis factor
binding protein 1 (TNF blocking tumor necrosis factor)
#formal_name Homo sapiens #common_name man
30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change
24-cct-1997
Molecular cloning and expression of a receptor for human tumor necrosis factor.

nces MUID:90235285
                                                                                                                                                                                                                                                                                         A34899
                                                                                                                                                                                                                                                                                                                                                                                                         Loetscher, H.; Pan, Y.C.E.; Lahm, H.W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                  A34899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A38208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A38208; A34899; A34900; A36555; C36555; A38281; S12057; JT0758; A60231; A38258; A60594; A35010; JC2404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #length 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A38208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #disulfide_bonds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 56.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #molecular-weight 17827 #checksum 5022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1124; DB 5;
Pred. No. 2.23e-230;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1; Mismatches
                                                                                                                                                                                                                                                                                                                                                of,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 158;
                                                                                                                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                                                                                                                                                                         Gentz, R.; Brockhaus,
                                                                                                                                                                                                                                                                                                                                                55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                kd tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TNRF1) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    142
                                                                                                Raab,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P. F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #authors Nophar, Y.; Kemper, O.; Brakebusch, C.; Engelmann, H.; Zwaler, Aderka, D.; Holtmann, H.; Wallach, D.
#journal EMBO J. (1990) 9:3269-3278

#title Soluble forms of tumor necrosis factor receptors (TNF-Rs).
The CDNA for the type I TNF-R, cloned using amino acid sequence data of its soluble form, encodes both the cell surface and a soluble form of the receptor.
#cross-references MUID:91006021
#accession Abuzzz
##molecule_type protein
##molecule_type di-43,'X',45-53,'X',55-57 ##label SEC
                                                                                                                                                                                                                                                                                                                                                                                                                                   #authors
#journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #journal Proc. Natl. Acad. Sci. U.S.A. (1990) 87:7380-7384
#title Cloning of human tumor necrosis factor (TNF) receptor cDNA
and expression of recombinant soluble TNF-binding protein.
#cross-references MUID:91017509
#accession A38281
                                                                                      #title Tumor necrosis factor inhibitor: purification, NH-2-term1 amino acid sequence and evidence for anti-inflammatory immunomodulatory activities.

#cross-references MUID:90292116
#accession A60231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #journal #title
                                                                                                                                                                                                                     #journal
                                                                                                                                                                                                                                                                                                                                                                                     #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #cross-references MUID:91090841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #authors
                                                                                                                                                                                                                                                                              #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     **residues 1-455 **label SCH

**Cross-references GB:M33234; NID:g339744; PID:g339745

ENCE A36555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ##molecule_type protein
##residues 30-38;41-53,'X',55-79,'XX',82-94,'NK';'XX',100-104;
##residues 107-128;162-167,'X',169-201 ##label HI2

##note the purified protein, called tumor necrosis factor
binding protein, is a soluble derivative of the
                                                                                                                                                                                                                                                                                                                               ##residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ##residues 1-455 ##label NOP
##cross-references EMBL:x55313; NID:g37223; PID:g37224
##note parts of soluble TNF binding protein 1, including
amino and carboxyl ends, were confirmed by prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ##residues 1-455 ##label
##cross-references GB:M63121;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                     ##molecule_type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ##residues 1-455 ##label GRA
##cross-references GB:M37764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                Remper, O.; Wallach, D.
Gene (1993) 134:209-216
Cloning and partial characterization of the promoter
human p55 tumor necrosis factor (TNF) receptor.
JT0758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Himmler, A.; Maurer-Fogy, I.; Kroenke, M.; Scheurich, P. Pfizenmaier, K.; Lantz, M.; Olsson, I.; Hauptmann, R.; Stratowa, C.; Adolf, G.R.
DNA Cell Biol. (1990) 9:705-715
DNA Cell Biol. (1990) 9:705-715
Molecular cloning and expression of human and rat tumor necrosis factor receptor chain (p60) and its soluble derivative, tumor necrosis factor-binding protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C36555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A34900
                                                                                                                                                                                                                        Eur. J. Immunol. (1990) 20:1167-1174
                                                                                                                                                                                                                                                                         Seckinger, P.; Vey, E.; Turcatti, G.; Wingfield,
                                                                                                                                                                                                                                                                                                         A60231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JT0758
                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the authors translated the codon TGG for residue 371 Thr, AAG for residue 372 as Leu, and GAC for residu
                                                                                                                                                                                                                                                                                                                               1-13 ##label KEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P.W.; Barrett, K.; Chantry, D.; Turner, M.; Feldmann,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   as Asn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HIM
NID:g339755; PID:g339756
                                                                                                                                                                     NH-2-terminal flammatory and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  by protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           for residue
                                                                                                                                                                                                                                                                            ۳
:.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             H.; Zwang
                                                                                                                                                                                                                                                                            Dayer,
```

```
KEYWORDS
FEATURE
1-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
#authors
                                                             SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #journal Proc. Natl. Acad. Sci. U.S.A. (1990) 87:8781-8784
#title purification and characterization of an inhibitor (soluble tumor necrosis factor receptor) for tumor necrosis factor and lymphotoxin obtained from the serum ultrafiltrates of human cancer patients.

#accession A38258
                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #journal #title
                                                                                                44-82
84-126
127-167
168-196
212-234
235-455
54,145,151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #journal
#title
                                                                                                                                                                                                                                                                       30-211
41-201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #cross-references MUID:90110215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #map_position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #accession
                                                                                                                                                                                                                                                                                                                                     22-455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        authors
                                                                                                                                                                                                                                                                                                                                                                                                                  ##cross-references GDB:125913; OMIM:191190
ap_position 12p13.2-12p13.2
atrons 13/3; 65/1; 108/1; 158/1; 184/2; 209/1; 247/1; 256/3; 353/1
IFICATION #superfamily tumor necrosis factor receptor type 1; NGF
receptor repeat homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ##experimental_source urine
This protein is one of two
(cachectin) and TNF-beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ##molecule_type protein
##residues 41-53,'X',55-144,'X',146-150,'X',152-186,'X',188-201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ##molecule_type protein
##residues 41-45 ##label ENG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ##experimental_source renal failure patient
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ##molecule_type protein
#1-43,'X',45-53,'V',55-57,'XK',60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ##experimental_source cancer patient serum
INCE A60594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ##molecule_type protein
##residues 41-60 ##label GAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ##experimental_source normal urine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Olsson, I.; Lantz, M.; Nilsson, E.; Peetre, C.; Thy Grubb, A.; Adolf, G.
Eur. J. Haematol. (1989) 42:270-275
Isolation and characterization of a tumor necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JC2404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kajihara, J.; Asada, A.; Kirihara, S.; Kato, K.
Biosci. Biotechnol. Biochem. (1994) 58:2266-2268
Amino acid sequence of natural tumor necrosis factor alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Two tumor necrosis factor-binding proteins purified from
human urine. Evidence for immunological cross-reactivity
with cell surface tumor necrosis factor receptors.
                                                                                                                                                                                                                                                                                                                                                                                              duplication; glycoprotein; receptor; transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GDB: TNFR1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A35010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Engelmann, H.; Novick, D.; Wallach, J. Biol. Chem. (1990) 265:1531-1536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A60594
                                                           #length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A35010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   binding protein from urine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        inhibitor purified from
                                                                                                                  #domain extracellular #status predicted #label EXT\
#product TWP binding protein 1 (tumor necrosis factor
alpha inhibitor) #status experimental #label TBPl\
#domain NGF receptor repeat homology #label NG2\
#domain NGF receptor repeat homology #label NG3\
#domain NGF receptor repeat homology #label NG3\
#domain NGF receptor repeat homology #label NG4\
#domain NGF receptor repeat homology #label NG4\
#domain transmembrane #status predicted #label MEM\
#domain intracellular #status predicted #label INT\
                                                                                                                                                                                                                                                                                                               #product tumor necrosis factor receptor type 1 *status
predicted #label MAT\
                                                                                                #binding_site carbohydrate (Asn) (covalent) #status
                                                                                                                                                                                                                                                                                                                                                    domain signal sequence #status predicted #label SIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ##label KAJ
                   56.48;
                                                         #molecular-weight 50494 #checksum 153
                   Score 1124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (lymphotoxin)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             known receptors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human urine.
                   BB
                 ;:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cappuccini, F.; Lucci III, Tomich, J.; Yamamoto,
               Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ##label
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S_{10}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Thysell,
124
                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #note
                                                                                                                                                                                                                                                                                                                                                                                                  66-68
```

```
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
#authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PDB_TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                               141-143
151-154
7-9.17-19
131-134,137-140
131-134,93-42
25-29,39-42
71-74,83-85
90-96,99-104
111-115,124-127
64-84
86-102
105-117
108-125
127-138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #authors
#journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               101 SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KONTVCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KONTYCTCHAGFFLRENECVSCS 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                    Determination: X-ray diffraction R-value: no refinement binding protein; cytokine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               receptor activation. Resolution: 1.85 angstroms
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Banner, D.W.; D'Arcy, A.; Janes, W.; Gentz, R.; H.J.; Broger, C.; Loetscher, H.; Lesslauer, W. Cell (1993) 73:431-445
Crystal structure of the soluble human 55 kd TNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Naismith, J.H.; Devine, T.Q.; Brandhuber, B
J. Biol. Chem. (1995) 270:13303
Crystallographic evidence for dimerization
tumor necrosis factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         submitted to the Brookhaven Protein sces PDB:1EXT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        extracellular domain of the 55kda tumor necrosis factor receptor. crystallized at ph3.7 in p 21 21 21.
#formal_name Homo sapiens #common_name man expressed in Escherichia coli, the construct contains residues 12 to 172 of the mature sequence of the entire receptor. residue 11 is mutated to met as a result of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative

    K.; Naismith, J.H.; Sprang, S.R.
    J. Mol. Biol. (1994) 239:332
    Two crystal forms of the extracellular necrosis factor receptor.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rodseth, L.E.; Brandhuber, B.; Devine,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A65560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tumor necrosis factor receptor extracellular domain, chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Naismith, J.H.; Sprang, S.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       expression system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         receptor-human INFbeta complex: implications for
                                                                                                                                                                                             #region helix (right h
#region helix (right h
#region belix (right h
#region beta sheet\
                                                                                            #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
                  #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                         protein; cytokine; signalling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. 2.23e-230;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                            hand
                                                                                                                                                                                                                                                                                                                                                              hand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Brandhuber, B.J.;
                                                                                                                                                                                                                                                                                                                       1 3-10)\
1 3-10)\
1 alpha)\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Data
                                                                                                                                                                                                                                                                                                                                                                                                         protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ю
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bank, July 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of unliganded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sprang,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Schoenfeld,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    type i tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S.R.
```

```
FEATURE
2-16
2-16
20-39
42-57
60-75
63-83
85-101
104-116
1107-124
1107-124
                                                                                                                                                                                                                                                                                                                 COMMENT
    ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
#authors
                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ALTERNATE_NAMES
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARY
                                                             Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                            #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      141-154
144-150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *cross-referen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #note
                                                                                                                                                                                                                                                                                                                                                                                                                                       #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
      25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24
QNTVCTCHAGFFLRENECVSCS 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQQDTDCRECESGSFTASENHLRHCLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QNTVCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEK 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLS 83
                                                                                                                                                                                                                                                                                                   R-value: no re
binding
                                                                                                                                                                                                                                                                                                                 receptor activation.
Resolution: 2.25 angstroms
Determination: X-ray diffraction
R-value: no refinement
                                                                           55.98;
Similarity 99.38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          h 56.1%;
Similarity 99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     K.; Naismith, J.H.; Sprang, S.R.
J. Mol. Biol. (1994) 239:332
Two crystal forms of the extracellular domain necrosis factor receptor.
a40737
                                                                                                                                                                                                                                                                                                                                                                                        H.J.; Broger, C.; Loetscher, H.; Lesslauer, W. Cell (1993) 73:431-445
Crystal structure of the soluble human 55 kd TNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               stnfr1; type i receptor

#formal_name Homo sapiens #common_name man
expressed in Escherichia coli, residue 11:
as_a result of the expression system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *disulfide_bonds\
*disulfide_bonds
*length 160 *molecular
                                                                                                                                                                                                                                                                                                                                                                                                                    Banner, D.W.; D'Arcy, A.; Janes, W.; Gentz, R.;
H.J.; Broger, C.; Loetscher, H.; Lesslauer, W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Naismith, J.H.; Sprang, S.R. submitted to the Brookhaven Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tumor necrosis factor receptor 55 kd extracellular domain contains residues 12 172 of the mature receptor sequence chain B - hu
                                                                                                                          #length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TN029041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ces PDB: 1NCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                         receptor-human TNFbeta complex:
                                                                                                                                   *disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     160 #molecular-weight 18065 #checksum
                                                                                                                                                                                                                                                                                                   protein; cytokine; signalling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #type complete
                                                                                                                      #molecular-weight 16046 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 1118; DB 5;
Pred. No. 5.83e-229;
1; Mismatches 0;
                                                          Score 1114; DB 5;
Pred. No. 5.14e-228;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                            implications for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 160
                                                                                        Length 142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Data
                                                                                                                                                                                                                                                                                                   protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          T.Q.; Eck, M.J.; Hale,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11 is mutated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bank,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of type 1 tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       October 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                    Schoenfeld,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ៩
   84
                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
KEYWORDS
FEATURE
1-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
#authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
ORGANISM
                                                                             RESULT
ENTRY
                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                        Ş
                                                                                                                                                                      밁
                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VQ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                  TITLE
                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                     SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
   ALTERNATE_NAMES
                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                                   16-29
19-38
41-56
59-74
62-82
84-100
103-115
106-123
125-136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #cross-references PDB:1TNR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     145 NTVCTCHAGFFLRENECVSCA 165
                                                                                                                                          146 TYCTCHAGFFLRENECYSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 NTVCTCHAGFFLRENECVSCS 141
                                                                                                                                                                     121 TVCTCHAGFFLRENECVSC 139
                                                                                                                                                                                                    86 KCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQ 120
                                                                                                                                                                                                                                 61 KCRKEMGOVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQN 120
                                                                                                                                                                                                                                                                 26 CPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSCS
                                                                                                                                                                                                                                                                              1 CPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSCS
                                                                                             σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Crystallization and preliminary analysis tnf-beta-55 kd tnf receptor complex. Resolution: 2.85 angstroms
Determination: X-ray diffraction
Complex(lymphokineRECEPTOR)
                                                                                                                                                                                                                                                                                                                          h 55.4%;
Similarity 100.0%;
139; Conservative
tumor necrosis factor receptor
contains residues 12 172 of t
chain A - hu
stnfr1; type i receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TN034093
D'arcy, A.; Banner, D.W.; Janes, Loetscher, H.; Schoenfeld, H.J. Lesslauer, W.
J. Mol. Biol. (1993) 229:555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Crystal structure of the soluble human 55 kd TNF receptor-human TNFbeta complex: implications for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Banner, D.W.; D'Arcy, A.; Janes, W.; Gentz, R.;
H.J.; Broger, C.; Loetscher, H.; Lesslauer, W.
Cell (1993) 73:431-445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              recombinant form A52442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tumor necrosis factor receptor type 1 (P55 extracellular
#formal_name Homo sapiens #common_name man
                                                                             1NCFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Banner, D.W. submitted to
                                                                                                                                                                                                                                                                                                                                                                                      #length 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A40737
                                                                                                                                                                                                                                                                                                                                                                                                                            #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                 #disulfide_bonds\
#disulfide_bonds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tor activation.
                                                                            *type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #type complete
                                                                                                                                          164
                                                                                                                                                                                                                                                                                                                                                                                     #molecular-weight 15746 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the Brookhaven Protein Data Bank, May
                                                                                                                                                                                                                                                                                                                       Score 1105; DB 5;
Pred. No. 6.85e-226;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              expressed in
                               the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Baculovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              W.; Winkle J.; Zulauf,
                              kd extracellular mature receptor s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Winkler, F
Zulauf, M.;
                                                                                                                                                                                                                                                                                                                                                     Length 139
                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of tnf-beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SF9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gentz,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Schoenfeld,
                                                                                                                                                                                                                                                                                                                                                                                      5235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1994
                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                 85
                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               70
...
                                                                                                                                                                                                                                                                                                                          0
```

```
ACCESSIONS
REFERENCE
#authors
#journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
#note
                                                                                                                                                                                                  TITLE
DATE
                                                                                                                                                                                                                                             RESULT
ENTRY
                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE
5-19
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #cross-references PDB:1NCF
REFERENCE TN029039
                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-33
45-60
63-78
66-86
88-104
107-119
110-127
129-140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #journal #title
                       #*residues 1-461 ##label
##cross-references GB:U19994;
#accession PC4093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #submission
                                                                                      #accession
                                                                                                                #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #authors
                                                                                                                                                                                                                                                                                                   143
           ##molecule_type
                                                                                                                                                                                                                                                                                                                             122
                                                                    ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                         83
                                                                                                                                                                                                                                                                                                                                                                                     62
                                                                                                                                                                                                                                                                                                                                                                                                                 23
                                                                                                                                                                                                                                                                                                                                                                                                                              2 DSVCPQGKX1HPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSETASENHLRHCL 61
                                                                                                                                                                                                                                                                                                                                                                     SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 121
                                                                                                                                                                                                                                                                                                KQNTVCTCHAGFFLRENEC 161
                                                                                                                                                                                                                                                                                                                                                                                                              DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                            KONTYCTCHAGFFLRENEC 140
                                                                                                                                                                                                                                                                                                                                                      SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             receptor activation.
Resolution: 2.25 angstroms
Determination: X-ray diffraction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R-value: no refinement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      h 55.1%; Score 1098; DB 5;
Similarity 100.0%; Pred. No. 3.08e-224;
139; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       K.; Naismith, J.H.; Sprang, S.R.
J. Mol. Biol. (1994) 239:332
Two crystal forms of the extracellular domain
necrosis factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     as a result of the expression system A66195
                                                                                                            Suter, B.; Pauli, U.
Gene (1995) 163:263-266
Cloning of the cDNA encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Crystal structure of the soluble human 55 kd TNF receptor-human TNFbeta complex: implications f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Banner, D.W.; D'Arcy, A.; Janes, W.; Gentz, R
H.J.; Broger, C.; Loetscher, H.; Lesslauer,
Cell (1993) 73:431-445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Naismith, J.H.; Sprang, S.R. submitted to the Brookhaven Protein Data
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #formal_name Homo sapiens #common_name man
expressed in Escherichia coli, residue 11 is mutated
                                                                                      JC4302
                                                                                                                                                         JC4302
JC4302
                                                                                                                                                                                              tumor necrosis factor receptor p55 - pigORGANISM 29-Nov-1995 *sequence_revision 08-Feb-1996 *text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #length 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  binding protein; cytokine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rodseth, L.E.; Brandhuber, B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A40737
                                                                                                                                                                                                                                           JC4302
                                                                                                factor receptor.
                                                                                                                                                                                  L2-Dec-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #disulfide_bonds\
    1-7 ##la
                                                                                                                                                                       ; PC4093
                                                                                                                                                                                                                                        *type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #molecular-weight 15889 #checksum
                                          SUT
NID:g1141752;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   signalling protein
                                                                                                                the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Devine, T.Q.;
                                           PID:g1141753
                                                                                                               porcine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gentz, R.;
esslauer, W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                               p55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bank,
                                                                                                                tumor necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eck, M.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           October
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Schoenfeld,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       type i tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç
                                                                                                                                                                                                                                                                                                                                                        142
                                                                                                                                                                                                                                                                                                                                                                                                              82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  met
                                                                                                                                                                                                              #tormal_name
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
FEATURE
1-29
                                                                                                                                                                                                                                                                                                                                                                                               ACCESSIONS
REFERENCE
  밁
                           Qγ
                                                       밁
                                                                                                                                                                                  CLASSIFICATION
                                                                                                                                                                                                                           GENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                          DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #gene
CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                           SUMMARY
                                                                                                                                                      KEYWORDS
                                                                                Query Match 42.2%;
Best Local Similarity 70.6%;
Matches 101; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             44-82
211-231
361-447
                                                                                                                                                                                                 #gene
#introns
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44-194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-461
                                                                                                                                                                                                                                                                                                                                                                                  #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  54,145,151
                                                                                                                                                                                                                                                                                                  #accession
  101
                                                                                                                                                                                                                                        ##molecule_type DNA
#residues 1-454 ##label
##cross-references GB:M76656;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ##experimental_source kidney cell line
                             23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
SCKTCRKEMSQVEISPCQADKDTVCGCKENQFQRYLSETHFQCVDCSPCFNGTVTIPCKE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            h 48.2%;
Similarity 69.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     predicted #length 461 #mo
                                                                                                                                                                                                                                                                                                  I57826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    I57826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                     Steinmetz, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #type complete
```

```
#journal Mol. Immunol. (1993) 30:165-176
#title Genomic organization and promoter function of
tumor necrosis factor receptor beta gene.
#cross-references MUID:93156721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41 DSLCPQGKYVHSKNNSICCTKCHKGTYLVSDCPSPGRDTVCRECEKGTFTASQNYLRQCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41 ESICPQGKYSHPQNRSICCTKCHKGTYLHNDCLGPGLDTDCRECDNGTFTASENHLTQCL 100
KQNTVCTCHAGFFLRENECVSCAG-AAPGCPE-C-TLQENPF-FSQPGAPIL 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KQDTICNCHSGFFLRDKECVSCVNCKNADCKNLCPATSETRNDFQDTGTTVL 212
                                                                                                                                                                                13/3; 65/1; 108/1; 158/1; 184/2; 210/1; 248/1; 257/3; #superfamily tumor necrosis factor receptor type 1; NG receptor repeat homology cytokine receptor type 1; NG cytokine receptor #length 454 #molecular-weight 50030 #checksum 4267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #superfamily tumor necrosis factor receptor type 1; NGF
receptor repeat homology
glycoprotein; kidney; receptor; transmembrane protein; tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tumor necrosis factor receptor 02-Aug-1996 #sequence_revision 23-May-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rothe, J.G.; Bluethmann, H.; Gentz,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #domain signal sequence #status predicted #label SIG\
#product tumor necrosis factor receptor p55 #status
predicted #label MAT\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #label EXT\
#domain NGF receptor repeat homology #label NG1\
#domain transmembrane #status predicted #label TMM\
                                                                                                                                                                                                                                                                                                                                                                                                                           preliminary; translated from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #binding_site carbohydrate (Asn) (covalent) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #domain signal transduction #status predicted #label
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #domain extracellular cysteine rich #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #molecular-weight 50696
                                                                                        Score 841; DB 2; L
Pred. No. 7.05e-164;
23; Mismatches 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 962; DB 2; Le
Pred. No. 3.26e-192;
22; Mismatches 26;
                                                                                                                                                                                                                                                                                                                                                       RES
NID:g202100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        - mouseORGANISM
02-Aug-1996 #te:
                                                                                             19;
                                                                                                                                                                                                                                                                                                                                                    PID: g202102
                                                                                                                                                                                                                                                                                                                                                                                                                              GB/EMBL/DDBJ
                                                                                                                                         Length 454;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #checksum 8079
                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lesslauer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the murine
                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ε.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #formal_name
                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ٠.
```

```
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DATE
                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSIONS
                                                                                                                                                                                                                                                                                                                                        #authors
#journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #journal
#title
                                                                                                                     #journal Immunogenetics (1994) 39:450-451
#title Nucleotide sequence of the TNF ty
endothelloma cell line.
#cross-references MUID:94245292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C.I.; Copeland, N.G.; Jenkins, N.A.; Smith, C.A.
Mol. Cell. Biol. (1991) 11:3020-3026
#title Molecular cloning and expression of the type 1 and
murine receptors for tumor necrosis factor.
#cross-references_MUID:91246168
                                                                                                              #accession
                                                                                                                                                                                                                                                                                      #accession
                                                                                                                                                                                                                                                                                                      *cross-references MUID:92039815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #cross-references MUID:91285014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *cross-references
                                                                                                                                                                                                 authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  143
##residues 1-454 ##label RES
##cross-references GB:L26349; NID:g430732; PID:g430733
#This protein is one of two distantly related receptors
TNF-alpha (cachectin) and TNF-beta (lymphotoxin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              161
                                                                      **molecule_type mRNA
                                                                                                                                                                                                                                 ##cross-references EMBL:X57796;
                                                                                                                                                                                                                                                                ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                        **molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ##cross-references GB:M60468; NID:g199825; PID:g199826
                                                                                                                                                                                                                                                                                                                                                                                                        ##cross-references EMBL:X59238; NID:g53578; PID:g53579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ##residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TONTYCNCHAGFFLRESECVPCS 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KONTVCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Barrett, K.; Taylor-Fishwick, D.A.; Cope, A.P.; Kissonerghis, A.M.; Gray, P.W.; Feldmann, M.; Foxwell, B.M.J.
Eur. J. Immunol. (1991) 21:1649-1656
Cloning, expression and cross-linking analysis of the murine p55 tumor necrosis factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lewis, M.; Tartaglia, L.A.; Lee, A.; Bennett, G.L.; Rice G.C.; Wong, G.H.W.; Chen, E.Y.; Goeddel, D. V. Proc. Natl. Acad. Sci. U.S.A. (1991) 88:2830-2834 Cloning and expression of cDNAs for two distinct murine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S16677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tumor necrosis factor receptor type 1 precursor - mouseALTERNATE_NAMES #formal_name Mus musculus #common_name house mouse 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 05-Sep-1997
                                                                                                                                                                                                                                                                                      S19021
                                                                                                                                                                                                                                                                                                                                                         Rothe, J.G.; Brockhaus, M.; Gentz, R.; Lesslauer, W. Immunogenetics (1991) 34:338-340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B40254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Goodwin, R.G.; Anderson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A40254
                                                                                                          I54532
                                                                                                                                                                                                 Bebo, B.F.
                                                                                                                                                                                                                                                                                                                                     Molecular cloning and expression of the mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S16677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A38634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A38634; B40254; S16677; S19021; I54532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 necrosis factor receptors demonstrate one receptor is species specific.
                                                                                                                                                                                                                                                                                                                                                                                                                             1-454 ##label BAR
                                                                                                                                                                                                                                                  1-454 ##label ROT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1-454 ##label LEW
                                                                                        translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #type complete
                                                                                                                                                                                                                                NID:g54848; PID:g54849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      D.; Jerzy, R.; Davis, T.;
Jenkins, N.A.; Smith, C.A.
                                                                                                                                                           type
                                                                                                                                                         I receptor from
                                                                                                                                                                                                                                                                                                                                     Inf receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kissonerghis,
                   for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       type 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Brannan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
FEATURE
1-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                           FEATURE
                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                              CLASSIFICATION
                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     44-82
84-126
127-167
168-204
213-235
236-454
              44-82
84-126
127-167
168-204
                                                                                                                                                                                                                                                                                                                                                                                                                        #journal
#title
                                                                                                     30-211
30-201
                                                                                                                                                         30-461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       54,151,202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101;
```

```
#cross-references MUID:91090841 #accession B36555
                                                                                                                                                                                                                                                                                                                                                                                                                                       ##molecule_type mRNA

##cesidues 1-461 #|abel HIM

##cross-references GB:M63122; NID:g207361; PID:g207362

This protein is one of two known receptors for both TNF-alpha

(cachectin) and TNF-beta (lymphotoxin).

(cachectin) tumor necrosis factor receptor type 1; NGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  143 KONTYCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     161 TQNTVCNCHAGFFLRESECVPCS 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               101 SCKTCRKEMSQVEISPCQADKDTVCGCKENQFQRYLSETHFQCVDCSPCFNGTVTIPCKE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23 DSYCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41 DSLCPQGKYVHSKNNSICCTKCHKGTYLVSDCPSPGRDTVCRECEKGTFTASQNYLRQCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    83 SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       h 42.2%;
Similarity 70.6%;
101; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Molecular cloning and expression of human and rat tumor necrosis factor receptor chain (p60) and its soluble derivative, tumor necrosis factor-binding protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Himmler, A.; Maurer-Fogy, I.; Kroenke, Pfilenmaier, K.; Lantz, M.; Olsson, Stratowa, C.; Adolf, G.R.
DNA Cell Biol. (1990) 9:705-715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tumor necrosis factor receptor type 1 precursor - ratCONTAINS #formal_name Rattus norvegicus #common_name Norway rat 30-Jun-1992 #sequence_revision 07-Oct-1994 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *superfamily tumor necrosis factor receptor type receptor repeat homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   duplication;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #length 454  #molecular-weight 50129  #checksum 4839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-Sep-1997
                                                                                                                                                                                                                                                                                                                                                                                                                      receptor repeat homology
*product tumor necrosis factor binding protein *status predicted *label TBP\
domain NGF receptor repeat homology *label NG1\
*domain NGF receptor repeat homology *label NG3\
*domain NGF receptor repeat homology *label NG3\
*domain NGF receptor repeat homology *label NG3\
*domain NGF receptor repeat homology *label NG4\
*domain NGF receptor repeat homology *label NG4\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #domain extracellular *status predicted *label EXT\
#domain NGF receptor repeat homology *label NG1\
#domain NGF receptor repeat homology *label NG2\
#domain NGF receptor repeat homology *label NG3\
#domain NGF receptor repeat homology *label NG4\
#domain NGF receptor repeat homology *label NG4\
#domain transmembrane *status predicted *label NEM\
#domain intracellular *status predicted *label NEM\
#binding_site carbohydrate (Asn) (covalent) *status
                                                                                                                                                                                                                                              #domain signal sequence #status predicted #label SIG\
#product tumor necrosis factor receptor type 1 #statu
predicted #label MAT\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *domain signal sequence *product tumor necrosis
                                                                                                                                                                                                                     #domain extracellular #status predicted #label EXT\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              predicted #label MAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               glycoprotein; receptor; transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                          glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 841; DB 1; L
Pred. No. 7.05e-164;
23; Mismatches 19;
                                                                                                                                                                                                                                                                                                                                                                                          receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *status predicted *label SIG\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          factor receptor type 1 #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 454;
                                                                                                                                                                                                                                                                                                                                                                                          transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    I.; Hauptmann,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scheurich,
                                                                                                                                                                                                                                                                                 type 1 *status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

transmembrane #status predicted

#label MEM

The

primary

structure

of the

SA2

W.H.;

Ryan,

```
ORGANISM
DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                            #journal J. Biol. Chem. (1981) 256:1816-1823
#title The amino acid sequences of the prepeptides contained in alpha and beta subunits of human choriogonadotropin.
#cross-references MUID:81117268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              235-461
54,151,201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                  #authors Fiddes, J.C.; Goodman, H.M.
#journal J. Mol. Appl. Genet. (1981) 1:3-18
#title The gene encoding the common alpha
#title glycoprotein hormones.
#cross-references_MUID:82267643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #title Isolation, cloning and sequence analysis of the cDNA alpha-subunit of human chorionic gonadotropin. #cross-references_MUID:80011660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #accession
#authors
                                                                                                                                                                                                                          #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                   #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ##residues 1-116 ##label ##cross-references GB:V00518;
                                                                          ##note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     143 KONTYCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                 ##residues
                                                                                                                                                                                                  ##molecule_type
                                                                                                                                                                                                                                                                                                                                                                   ##cross-references GB:V00484
                                                                                                                                                                                                                                                                                                                                                                                            ##residues
                                                                                                                                                                                                                                                                                                                                                                                                         ##molecule_type DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161 KONTYCNCHAGFFLSGNECTPCS 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41 DNLCPQGKYAHPKNNSICCTKCHKGTYLVSDCPSPGQETVCEVCDKGTFTASQNHVRQCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SCKTCRKEMFQVEISPCKADMDTVCGCKKNQFQRYLSETHFQCVDCSPCFNGTVTIPCKE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DSVCPQGKYTHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40.6%;
Similarity 68.5%;
98; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            glycoprotein hormones alpha chain precursor - humanALTERNATE_NAMES alpha chain; follitropin alpha chain; interstitial cell-stimulating hormone alpha chain; lutropin alpha chain; thyroid-stimulating hormone alpha chain; thyrotropin alpha chain; hormone alpha chain; thyrotropin alpha chain #formal_name Homo sapiens #common_name man 13-Jul-1981 #sequence_revision 23-Oct-1981 #text_change
A90751
Sairam,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A93213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A93213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A92832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nature (1979) 281:351-356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A93213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTHUAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-Sep-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3213; A92832; B92303; A90751; A90179; A91461; A92184; A94552; B92181; A92141; I58200; A01481
                                                                                                                                                                             protein
1-24 ##label BIR
                                                                                                                                                                                                                                                                                                                                                                                          1-98 ##label FI2
                                restriction endonuclease evidence indicates that a single gene codes for the alpha chain common to the four dimeric hormones: thyrotropin, lutropin, follitropin, and choriogonadotropin previously the mature alpha chain (residues 25-116) was isolated from each of the hormones and its sequence was determined, as documented below
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #domain intracellular #status predicted #label INT\
#binding_site carbohydrate (Asn) (covalent) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           predicted
M.R.; L1, C.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   461 #molecular-weight 50969 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 809; DB 1; L
Pred. No. 2.05e-156;
21; Mismatches 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FID
NID:g31868; PID:g31869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               subunit of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               four
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           c
C
                                                              #title Human follicle stimulating hormone (hFSH): first proposal the amino acid sequence of the alpha-subunit (hFSHalpha) and first demonstration of its identity with the alpha-subunit of human luteinizing hormone (hLHalpha).
#cross-references MUID:74262937
#cross-references MUID:74262937
REFERENCE A90632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #journal
#title
#accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #authors Rathnam, P.; Saxena, B.B.
#journal J. Biol. Chem. (1975) 250:6735-6746
#title Primary amino acid sequence of follicle-stimulating hormone
from human pituitary glands.
#cross-references MUID:76005558
                                                                                                                                                                                                                                                                                                                                                                                                         #authors
                                                                                                                                                                                                                                                                                                                          #cross-references MUID:74011266
#accession A92141
                                                                                                                                                                                                                                                                                                                                                                                        #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #cross-references MUID:75211304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         primary structure of the alpha subunit.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #authors
#journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                alpha and beta subunits #cross-references MUID:77243687 #accession A90751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #submission
                   #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #authors
                                                         authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ##molecule_type protein
##residues 28-107,'SC',110-116 ##label
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ##molecule_type protein
##residues 28-107,'SC',110-116 ##label
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ##note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ##molecule_type protein
##residues 28-116 ##label SHO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ##molecule_type protein
##residues 28-116 ##label
                                                                                                                                                                                                                                                                                 ##residues
                                                                                                                                                                                                                                                                                                  ##molecule_type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ##residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ##molecule_type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sairam, M.R.; Papkoff, H.; Li, C.H.
Biochem. Biophys. Res. Commun. (1972) 48:530-537
Human pituitary interstitial cell stimulating hormone:
                                                                                                                                                                                                                                                                                                                                                                Bellisario, R.; Carlsen, R.B.; Bahl,
J. Biol. Chem. (1973) 248:6796-6809
Human chorionic gonadotropin. Linear
the alpha subunit.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Morgan, F.J.; Birken, S.; Canfield, R.E.
J. Biol. Chem. (1975) 250:5247-5258
The amino acid sequence of human chorionic gonadotropin. The alpha subunit and beta subunit.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Keutmann, H.T.; Williams, R.M.; Bishop, Fed. Proc. (1978) 37:1828
Structure of human luteninizing hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Can. J. Biochem. (1977) 55:75
Human pituitary thyrotropin.
              Fujiki, Y.; Rathnam, P.; Saxena, B.B. Biochim. Biophys. Acta (1980) 624:428-435 Studies on the disulfide bonds in human p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A92181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Shome, B.; Parlow, submitted to the A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A94552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A92184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A91461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A91461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A90179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A90179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A94552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A92184
                                                                                                                                                                                                                                                                                 protein
25-116 ##label BEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein
25-116 ##label MOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          heterogeneity is for 10 and 30% of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     respectively
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     w, A.F.
Atlas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1977) 55:755-760
```

April 1975

found at the he chains lac

the amino end. lack residues

Approximately 1-2 and 1-3,

Linear amino acid sequence

of.

pituitary

proposal for

```
GDB:CGA

##cross-references GDB:119774; OMIM:118850

#map_position 6914-6921

#introns 30/1; 91/3

CLASSIFICATION #superf
                                                                                                      #journal
#title
REFERENCE
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE
1-24
                                                                                                                                                                                            REFERENCE
#authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 8
                                  #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31-55,34-84,52-106,
56-108,83-111
76,102
                                                                                                                                                                                                                                             #authors #submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #journal
                                                                                                                                                                                                                               #cross-references PDB:1HRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #authors Miyoshi, I.; Kasai, N.; Hayashizaki, Y.
#journal Nippon Rinsho (1994) 52:940-947
#title [Structure and regulation of human thyroid-stimulating
hormone (TSH) gene].
#cross-references MUID:94254248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #cross-references MUID:81021713
#contents annotation; preli
                                                                                     #authors
                                                                                                                                                                                                                                                                                                    #note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ##molecule_type DNA
##residues 1-116 "-"
                                                                                                                                                                                                                                                                                                                                                                                                                         225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ##residues 1-116 ##label RES ##cross-references GB:S70585; NID:g546844;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 93.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25
                                                                                                                                                                                                                                                                                                                                                                      12
                                                                                                                                                                                                                                                                                                                                                                                                                                                     VAKSYNRVTVMGGFKVENHTACHCSTCYYHKS 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APDVQDCPECTLQENPEFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCC 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGAAPGCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCC
                             J. Biol. Chem. (1989) 264:6705
Preliminary x-ray diffraction analysis of human chorionic
                                                                                                                                                                      Lapthorn, A.J.; Harris, J.W.; Canfield, R.E.;
                                                                                                                                                                                                                                                                              chorionic gonadotropin, chain A - humanORGANISM placental origin, urinary extracted A52806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #superfamily glycoprotein hormones alpha chain
glycoprotein; heterodimer; hormone; pituitary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nature (1994) 369:455-461
Crystal structure of human chorionic gonadotropin.
annotation; X-ray crystallography, 3.0 angstroms; correction
of disulfide bonds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lapthorn, A.J.; Harris, D.C.; Littlejohn, A.; J.W.; Canfield, R.E.; Machin, K.J.; Morgan,
                                                                                                                     Nature (1994) 369:455
Crystal structure of human
                                                                                                                                                                                                                                          Lapthorn, A.J.; Harris, D.C.; Isaacs, N.W. submitted to the Brookhaven Protein Data Bank,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #length 116 #molecular-weight 13075 #checksum 1664
                                                                                Harris, D.C.; Machin, K.J.; Evin,
                                                                                                                                                                                                              TN022062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         annotation; preliminary disulfide bonds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
              gonadotropin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #disulfide_bonds #status experimental\
#binding_site carbohydrate (Asn) (cova experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #domain signal sequence #status experimental #label
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        experimental #label
                                                                                                                                                                                                                                                                                                                                                  *type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 667; Db .,
Pred. No. 1.71e-123;
                                                                                                                                                                        Machin, K.J.; Morgan,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MAT/
                                                                                                                 chorionic gonadotropin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hormones alpha chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PID:g546845
                                                                                G.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (covalent)
                                                                                Morgan, F.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lustbader, F.J.; Isaa
                                                                                                                                                                      F.J.; Isaa
                                                                                                                                                                                                                                          August
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         224
                                                                                                                                                                                                                                                                                                               #formal_name
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIG\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
KEYWORDS
FEATURE
4-28
7-57
25-79
29-81
56-84
                                                                                                                                                                                                                                                                                                                                                            FEATURE
37-41
                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
 밁
                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 8
                                                                                                     Query Match 32.3%; Score 645; DB 5; I Best Local Similarity 98.8%; Pred. No. 1.99e-118; Matches 82; Conservative 1; Mismatches 0;
                                                                                                                                                                                                                                                                   7-10,22-25
49-53,26-34
61-65,71-75
55-60,77-81
3-27
                                                                                                                                                                                               6-56
24-78
28-80
55-83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #cross-references PDB:1XUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               228 SYNRVTVMGGFKVENHTGCHCSTCYY 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   168 APGCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAK 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 SYNRVIVMGGFKVENHTACHCSTCYY 86
63 RVTVMGGFKVENHTACHCSTCYY 85
                                                       3 CPECTLQENPFFSQPGAPILQCMGCCESRAYPTPLRSKKTMLVQKNVTSESTCCVAKSYN 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TQDCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13
                                 CPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSYN 230
                                                                                                                                                                                                                                                                                                                                                                                      Resolution: not applicable
Determination: theoretical model
complex; 91/coprotein hormone
phosphorylation; receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Determination: X-ray diffraction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        similarity 95.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Structure (London) (1994) 2:545
Structure of human chorionic gonadotropin a from mad analysis of the selenomethionyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jiang, X.; Dreano, M.; Buckler, D.R.; Cheng, S.; Ythier, Wu, H.; Hendrickson, W.A.; El Tayar, N. submitted to the Brookhaven Protein Data Bank, December 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Structural predictions for the ligand-binding reglycoprotein hormone receptors and the nature hormone-receptor interactions structure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jiang, X.; Dreano, M.; Buckler, D.R.; Cheng, Wu, H.; Hendrickson, W.A.; El Tayar, N. Structure (London) (1996) 3:1341
                                                                                                                                                                             #length 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TN032624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A66957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #formal_name Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   chorionic gonadotropin, chain A - humanPDB_TITLE receptor complexed with human chorionic gonado
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #length 86 #molecular-weight 9572 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Wu, H.; Lustbader, J.W.; Liu, Y.; Canfield, R.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IN032623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hendrickson, W.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
                                                                                                                                                                                                                                                              #region helix (right)
#region beta sheet\
#region beta sheet\
#region beta sheet\
#region beta sheet\
#disulfide_bonds\
                                                                                                                                                                                           #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #type complete
                                                                                                                                                                           #molecular-weight 9471 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 647; DB 5; L
Pred. No. 6.89e-119;
2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens #common_name
                                                                                                                                                                                                                                                                                                                                                        hand alpha)
                                                                                                                                                                                                                                                                                                                                                                                                                                                            gonadotropin at 2.6 a resolution elenomethionyl protein.
                                                                                                                                                                                                                                                                                                                                                                                                          receptor glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2; Indels
                                                                                                                                          Length 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 86
                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gonadotropin
                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ythier,
                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                            hormone;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ö.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        theoretical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                > . ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                       0
```

ş

231 RVTVMGGFKVENHTGCHCSTCYY 253

```
ACCESSIONS
REFERENCE
#authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
FEATURE
36-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
  밁
                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #submission submitted to 
#cross-references PDB:1HCN 
REFERENCE TN020262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                    SUMMARY
                                                                                                                                                      ##residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                      KEYWORDS
                                    Query Match 27.6%;
Best Local Similarity 83.5%;
Matches 71; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 32.3%; Score 645; DB 5; Length 85; Best Local Similarity 98.8%; Pred. No. 1.99e-118; Matches 82; Conservative 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4-11,21-28
29-35,48-54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6-56
24-78
28-80
55-83
                                                                                                                                                                                                                                                #authors Golos, T.G.; Durning, M.; Fisher, J.M.
#journal DNA Cell Biol. (1991) 10:367-380
#title Molecular cloning of the rhesus glycoprotein hormone
alpha-subunit gene.
#cross-references_MUID:91321740
                                                                                                                                                                                                                                  #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #authors
                                                                                                          ##molecule_type DNA
##residues 1-120 ##label GOL
##residues 4superfamily glycoprotein hormones alpha chain
RDS glycoprotein
RDS glycoprotein 4length 120 #molecular-weight 13785 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              231 RVTVMGGFKVENHTGCHCSTCYY 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       171 CPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSYN 230
                                                                                                                                                                                                                ##status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63 RVTVMGGFKVENHTACHCSTCYY 85
35 CPECKPRENKFFSKPGAPIYQCMGCCFSRAYPTPVRSKKTMLVQKNVTSESTCCVAKSLT 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 CPECTLQENPFFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSYN 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein.
Resolution: 2.6 angstroms
Determination: X-ray diffraction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human chorionic gonadotropin, chain A - humanORGANISM A52587
Wu, H.; Lustbader, J.W.; Liu, Y.; Canfield, R.E.;
Hendrickson, W.A.
submitted to the Brookhaven Protein Data Bank, July 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wu, H.; Lustbader, J.W.; Liu, Y.; Canfield, R.E.;
Hendrickson, W.A.
Structure (1994) 2:545
Structure of human chorionic gonadotropin at 2.6 angstroms
resolution from mad analysis of the selenomethionyl
                                                                                                                                                                                                                                A39555
                                                                                                                                                                                                                                                                                                                                                                                    glycoprotein hormones alpha chain precursor - rhesus macaqueORGANISM
08-Nov-1991 #sequence_revision 08-Nov-1991 #text_change
13-Jan-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A39555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #length 85 #molecular-weight 9471 #checksum 9656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1HCNA
                                                                                                                                                                                                                                                                                                                                                                      A3955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #region helix (right hand alpha)\
#region beta sheet\
#region beta sheet\
                                                                                                                                                                                                          preliminary; not compared with conceptual translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #type complete
                                  Score 551; DB 2; Length 120; Pred. No. 6.48e-97; 4; Mismatches 10; Indels
                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                  5074
                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #formal_
```

, . .

```
QY 171 CPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSYN 230
Db 95 RVMVMGSVRVENHTECHCSTCYYHK 119
```

Search completed: Wed May 6 08:50:40 1998 Job time: 39 secs.

Ş

RVTVMGGFKVENHTGCHCSTCYYHK 255

THE STATE BLANK (USETO)

```
Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                   EUTHERS.
[1]
SEQUENCE FROM N.A.
MEDLINE; 91187885.
LEWIS M., TARTAGLIA L.A., I
LEWIS M., CHEN E.Y., GOED/
ACAD. SCI. U.f
                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAY-1992 (REL. 22, C
01-MAY-1992 (REL. 22, I
01-NOV-1997 (REL. 35, I
TUMOR NECROSIS FACTOR F
TNERL OR TNER-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TNR1_MOUSE
P25118;
01-MAY-1992
01-MAY-1992
01-NOV-1997
                                   SEQUENCE FROM N.A.

MEDILINE; 91285014.

BARRETT K., TAYLOR-FISHWICK D.A., COPE A.P.,

GRAY P.W., FELDMANN M., FOXWELL B.M.J.;

EUR. J. IMMUNOL. 21:1649-1656(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
CARBOHYD
                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE; 91246168.
GOODWIN R.G., ANDERSON D., JERZY R.,
COPELAND N.G., JENKINS N.A., SMITH C.
MOL. CELL. BIOL. 11:3020-3026(1991).
[3]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
REPEAT
REPEAT
REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                  MUS MUSCULUS (MOUSE).
EUKARYOTA; METAZOA; CHORDATA;
EUTHERIA; RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
 SEQUENCE FROM N.A
TISSUE-SPLEEN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KQDTICNCHSGFFLRDKECVSCVNCKNADCKNLCPATSETRNDFQDTGTTVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SCSKCRSEMSQVEISPCTVDRDTVCGCRKNQYRKYWSETLFQCLNCSLCPNGTVQLPCLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KONTYCTCHAGFFLRENECYSCAG-AAPGCPE-C-TLQENPF-FSQPGAPIL 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             48.2%;
llarity 69.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .A., LEE A., BENNETT G.L., R
GOEDDEL D.V.;
. U.S.A. 88:2830-2834(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
RECEPTOR 1 PRECURSOR (P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BY SIMILARITY.
POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 962; DB 1; I
Pred. No. 3.53e-226;
22; Mismatches 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TNFR-CYS 1.
TNFR-CYS 2.
TNFR-CYS 3.
TNFR-CYS 4.
DEATH DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                    VERTEBRATA; TETRAPODA; MAMMALIA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                      DAVIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         æ
                                                                                                                                                                                                        Η.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (P60) (TNF-R1) (P55).
                                                                                              KISSONERGHIS A.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26;
                                                                                                                                                                                                          BRANNAN C.I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 461;
                                                                                                                                                                                                                                                                                                                        RICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                        G.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
   -!- SUBCELLULAR LOCAT

-!- SUMILARITY: CONTA

EMBL; MS0468; G199826

EMBL; M59377; G202097

EMBL; X59238; G53579;

EMBL; X57796; G54849;

EMBL; L26349; G430733

EMBL; M76656; G202102

EMBL; M88067; G202102

EMBL; M88067; G202102

EMBL; M86067; G202102

EMBL; M86067; G202102

EMBL; M86067; G202102

EMBL; M5655; G202102

EMBL; M5654; G0MST1.

PIR; S19021; S19021,

PIR; S19021; S19021,

FIR; S19021; S19021,

FIR; S19021; S19021,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.

MEDLINE; 93156721.

ROTHE J., BLUETHMANN H
MOL. IMMUNOL. 30:165-1

-!- FUNCTION: RECEPTOR
               DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                               DOMAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ROTHE J., BLUETHMANN H., GENTZ R., LESSLAUER W., STEINMETZ M.;

MOL. IMMUNOL. 30:165-175(1993).

-i. FUNCTION: RECEPTOR FOR THE ACTIVATED RECEPTOR. THE RESULTING RECRUITS CASPASE-8 TO THE ACTIVATED RECEPTOR. THE RESULTING AGGREGATE CALLED THE DEATH-INDUCING SIGNALING COMPLEX (DISC) PERFORMS CASPASE-8 PROTEOLYTIC ACTIVATION WHICH INITIATES THE SUBSEQUENT CASCADE OF CASPASES (ASPARTATE-SPECIFIC CYSTEINE PROTEASES) MEDIATING APOPTOSIS (BY SIMILARITY).

-i. SUBUNIT: THE BINDING TO THE EXTRACELLULAR DOMAIN OF THEFI LEADS TO HOMOTRIMERIZATION. ONCE AGGREGATED THE RECEPTORS DEATH DOMAINS PROVIDE A NOVEL MOLECULAR INTERFACE THAT INTERACTS SPECIFICALLY WITH THE DEATH DOMAIN OF TRADD. VARIOUS TRADD-INTERACTING PROTEINS SUCH AS TRAFS, RIP AND POSSIBLY FADD, ARE RECRUITED TO TIVER COMPLEX BY THEIR ASSOCIATION WITH TRADD. THIS COMPLEX ACTIVATES AT LEAST TWO DISTINCT SIGNALING CASCADES, APOPTOSIS AND NETKAPRA B SIGNALING (BY SIMILARITY).

-I. SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN.

-I. SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN.

-I. SIMILARITY: CONTAINS A LA-NGFR/TNFR-TYPE CYSTEINE-RICH REGION.
                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                      DOMAIN
DOMAIN
REPEAT
REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                вево в.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE;
ROTHE J.G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ROTHE J.G., BROCKHAUS M., GENTZ R., IMMUNOGENETICS 34:338-340(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MMUNOGENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ### M60468; G199826; -.

### M5937; G202097; -.

### X5938; G53879; -.

### X57766; G54849; -.

### L26349; G402102; -.

### M8067; G202102; JOIN

### M76555; G202102; JOIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PS00652; TNFR_NGFR_1;
PS50050; TNFR_NGFR_2;
PS50017; DEATH_DOMAIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94245292.
., LINTHICUM D.S.;
NETICS 39:450-451(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TRANSMEMBRANE;
 TNFR1
 2352
2312
2312
2313
2454
4451
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
11066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOINED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLYCOPROTEIN; REPEAT; SIGNAL; APOPTOSIS
DEATH DOMAIN.
BY SIMILARITY
BOTENTIAL
BOTENTIA
                                                                                                                                                                                                                                                                                                                    CYTOPLASMIC ()
4 X TNER-CYS.
TNER-CYS 1.
TNER-CYS 2.
TNER-CYS 3.
TNER-CYS 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                       EXTRACELLULAR POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TUMOR NECROSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LESSLAUER
   REF.
                                                                                                                                                                                                                                                                                                                                                                                                                    (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FACTOR RECEPTOR
 <u>6</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₹.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
```

Ş 밁 Ş 밁 å 밁

Ş

Gaps 100

0

142

82

Ş

밁

Ş

밁

밁

```
TREET TO THE TREET TO THE TREET TREE
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
              CHAIN
DOMAIN
TRANSMEM
DOMAIN
DOMAIN
REPEAT
R
                                                                                                                                                                                                                                                                                                     PIR: BASSS, P19438; TITER.

HSSP; P19438; TITER.NGFR_1; 3.

PROSITE: PS00050; THER_NGFR_2; 3.

PROSITE: PS50017; DEATH_DOMAIN; 1.

PROSITE: PS50017; DEATH_DOMAIN; 1.

PROSITE: PS50017; DEATH_DOMAIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM MEDLINE; 910 HIMMLER A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RATTUS NORVEGICUS (RAT).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TUR1_RAT STANDARD; PRT; 461 AA. P22934; PF22934; PF229345; PF22934; PF22934; PF22934; PF22934; PF22934; PF22934; PF229345; PF22934; PF22934; PF22934; PF22934; PF22934; PF22934; PF2293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TONTYCHAGFFLRESECVPCS 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KQNTVCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SCKTCRKEMSQVEISPCQADKDTVCGCKENQFQRYLSETHFQCVDCSPCFNGTVTIPCKE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       91090841.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  42.2%;
              50129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MW;
         TNER-CYS 3.
TNER-CYS 4.
DEATH DOMAIN.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 841; DB 1; Length 454; Pred. No. 8.77e-193; 23; Mismatches 19; Indels
                                                                                                                                                                                                    CYTOPLASMIC (POTENTIAL).
4 X TNFR-CYS.
                                                                                                                                                                                                                                                      EXTRACELLULAR POTENTIAL.
                                                                                                                                                                                                                                                                                                POTENTIAL.
TUMOR NECROSIS FACTOR RECEPTOR 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4B6EEC09 CRC32;
                                                                                                                                                                                                                                                                            (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APOPTOSIS AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0111111111111111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local s
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GLHA_HUMAN STANDARD P01215; P01215; 21-JUL-1986 (REL. 01, C 21-JUL-1986 (REL. 01, L 01-NOV-1997 (REL. 35, L GLYCOPROTEIN HORMONES A
SEQUENCE OF 28-116.
MEDLINE; 72242988.
SAIRAM M.R., PAPKOFF H., LI C.H.;
BIOCHEM. BIOPHYS. RES. COMMUN. 48:530-537(1972).
[7]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID DISULFID DISULFID DISULFID DISULFID DISULFID DISULFID DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DISULFID CARBOHYD
                                                                                                                                           SEQUENCE OF 28-116.
MEDLINE; 77243687.
SAIRAM M.R., LI C.H.;
SAIN, J. BIOCHEM. 55:755-760(1977).
                                                                                                                                                                                                                                                                  SEQUENCE OF 1-24.

MEDLINE: 81117268.

BIRKEN S., FETHERSTON J., CANFIELD R.E.,

J. BIOL. CHEM. 256:1816-1823(1981).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
MEDLINE: 80011660.
FIDDES J.C., GOODMAN H.M.;
NATURE 281:351-356(1979).
                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 1-98 FROM N.A. MEDLINE; 82267643. FIDDES J.C., GOODMAN H.M.; J. MOL. APPL. GENET. 1:3-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. MEDLINE; 94254248.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EUTHERIA; PRIMATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EUKARYOTA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HOMO SAPIENS (HUMAN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MIYOSHI I., KASAI N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IPPON RINSHO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41 DNICPOGKYAHPKNNSICCTKCHKGTYLVSDCPSPGQETVCEVCDKGTFTASQNHVRQCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KQNTVCNCHAGFFLSGNECTPCS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SCHTCRKEMFQVEISPCKADMDTVCGCKKNQFQRYLSETHFQCVDCSPCFNGTVTIPCKE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KONTYCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
98; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  METAZOA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    84
102
105
127
146
149
168
182
182
185
185
185
185
185
                                                                                                                                                                                                                                                                                                                                                                                   GOODMAN H.M.;
,. GENET. 1:3-18(1981).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ASAI N., HAYASHIZAKI Y.;
52:940-947(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99
117
125
143
158
166
179
191
195
195
201
201
50969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CREATED)

LAST SEQUENCE UPDATE)

LAST ANNOTATION UPDATE)

ALPHA CHAIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 809; DB 1;
Pred. No. 5.45e-18
21; Mismatches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POTENTIAL.
82F68B08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CRC32;
                                                                                                                                                                                                                                                                                                BOIME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
RA DE BEER T., VAN ZUYLEN C.W.E.M., LEEFLANG B.R., HARD K., BOELENS R.,
RA KAPTEIN R., KAMERLING J.P., VLIEGENTHART J.F.G.;
RI EUR. J. BIOCHEM. 241:229-242(1996).

CC -1- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA
CC CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,
CC LUTROPIN, FOLLITROPIN AND GONADOTROPIN.

CC LUTROPIN, FOLLITROPIN AND GONADOTROPIN.

CR EMBL; JO0150; G183319; JOINED.

DR EMBL; JO0151; G183319; JOINED.

DR EMBL; JO0150; G183319; JOINED.

DR EMBL; S70583; G546845; JOINED.

DR EMBL; S70584; G546845; JOINED.

DR EMBL; S70584; G546845; JOINED.

DR EMBL; V00485; G669156; JOINED.

DR EMBL; V00487; G669156; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRUCT ST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RATHNAM P., SAAL
                   HORMONE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE;
MISE T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE;
                                                       MIM; 1885
PROSITE;
PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LAPTHORN A.J., HARRIS D.C., CANFIELD R.E., MACHIN K.J., NATURE 369:455-461(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         X-RAY CRYSTALLOGRAPHY MEDLINE; 94261179.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WEISSHAAR G., HIYAMA J., RENWICK A.G.C., EUR. J. BIOCHEM. 195:257-268(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRUCTURE OF CARBOHYDRATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY ASSIGNMENT MEDLINE; 81006887.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE; 81021713.
FUJIKI Y., RATHNAM P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BELLISARIO R., CARLSEN R.B., BAHL O.P.;
J. BIOL. CHEM. 248:6796-6809(1973).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SHOME B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE, AND REVISIONS KEUTMANN H.T., WILLIAMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BIOCHIM. BIOPHYS. ACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY ASSIGNMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 25-116.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MORGAN F.J., BIRKEN S., CANFIELD R.E., J. BIOL. CHEM. 250:5247-5258(1975).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 25-116.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BIOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BIOL.
                                                                                          R; A01481; TTHUAP.

3; 1HCN; 30-SEP-94.

3; 1HRP; 01-NOV-94.

1; 118850; -.

1; 188530; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OF 25-116.
75211304.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          74262937.
, PARLOW A.F.;
ENDOCRINOL. METAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               91122088
                                 PS00779; GLYCO_HORMONE_ALPHA_1; 1. PS00780; GLYCO_HORMONE_ALPHA_2; 1. GLYCOPROTEIN; SIGNAL; 3D-STRUCTURE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97054614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BAHL O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            74011266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OF 28-116.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               76005558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BY NMR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .T., WILLIAMS R.M., 37:1828-1828(1978).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SAXENA B.B.;
EM. 250:6735-6746(1975).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            255:8516-8522(1980)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SAXENA B.B.;
624:428-435(1980).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OF DISULFIDE BONDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OF DISULFIDE BONDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ANGSTROMS).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MORGAN F.J., ISAACS N.W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              39:199-202(1974).
GLYCOPROTEIN HORMONES ALPHA CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BISHOP W.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIMT2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RYAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
                                                       밁
                                                                                        Ş
                                                                                                                             멍
                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PIR; /
                                                                                                                                                                                                                                                                                                                                                                                                                CHAIN
                 231
                                                                                            171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              165
                                                       95
                                                                                                                             35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25
                 RVTVMGGFKVENHTGCHCSTCYYHK
```

```
Query Match
Best Local S
Matches
                                                                    Query Match
Best Local S
Matches 7
                                                                                                                                                                                                                                                                                                                                                                                                                        GLHA_MACMU STAN
P22762;
01-AUG-1991 (REL. 1
01-AUG-1991 (REL. 1
01-OCT-1996 (REL. 2
                                                                                                                         DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                       HORMONE;
                                                                                                                                                                                                                                                                                                                           MEDLINE;
GOLOS T.G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
CARBOHYD
CONFLICT
CONFLICT
                                                                                                                                                                                                                                         PROSITE;
                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                  GOLOS T.G., DURNING M., FISHER J.M.;
DNA CELL BIOL. 10:367-380(1991).
-i- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA
CHAIN WHICH CONTERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,
LUTROPIN, FOLLITROPIN AND GONADOTROPIN.
                                                                                                                                                                                                                                                                                                                                                                               MACACA MULATTA (RHESUS EUKARYOTA; METAZOA; CH
                                                                                                                                                                                                                                                                                                                                                                                                                GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                      EUTHERIA;
                                                                                                                                                                                                                                                                        A39555; A39555.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VAKSYNRVTVMGGFKVENHTACHCSTCYYHKS
RVMVMGSVRVENHTECHCSTCYYHK 119
                                      CPECKPRENKFFSKPGAPIYQCMGCCFSRAYPTPVRSKKTMLVQKNVTSESTCCVAKSLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VAKSYNRVTVMGGFKVENHTGCHCSTCYYHKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APDVQDCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCC
                              CPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSYN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGAAPGCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
86; Conser
                                                                      Similarity 71; Conser
                                                                                                                                                                                                                                                                                                                                      91321740.
                                                                                                                                                                                                                            PS00779; GLYCO_HORMONE_ALPHA_1; PS00780; GLYCO_HORMONE_ALPHA_2; GLYCOPROTEIN; SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31
34
52
56
83
63
76
102
102
108
                                                                                                            106
120
                                                                                                                                                                                                                                                                                                                                                                                                              (REL. 19, CREATED)
(REL. 19, LAST SEQUENCE UPDATE)
(REL. 34, LAST ANNOTATION UPDATE)
HORMONES ALPHA CHAIN PRECURSOR.
                                                                                                                                    35
35
56
60
67
80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                      Conservative
                                                                                                                                                                                                                                                               1HCN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  55
106
1108
1111
63
76
102
29
109
13075 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA;
                                                                                                                Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33.5%;
93.5%;
                                                                                                                                  24
120
59
88
110
112
115
115
                                                                               27.6%;
83.5%;
                                                                                                                                                                                                                                                                                                                                                                               SUS MACAQUE).
CHORDATA; VERTEBRATA; TETRAPODA;
                                                                                                                13785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ¥.
                                                                                                                ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 667; DB 1
Pred. No. 3.28e-
1; Mismatches
                                                                                                           BY SIMILARITY.
GIYCOPROTEIN HORMC
BY SIMILARITY.
                                                                     Score
Pred.
4; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   တ္သ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 -> E (IN REF. 8)
2S -> SC (IN REF.
3BA19E2F CRC32;
                                                                    re 551; DB 1; Le
d. No. 6.39e-114;
Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                           HORMONES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   σì
                                                                                         Length 120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AND
                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                           ALPHA CHAIN
                                                                                                                                                                                                                                                                                                                                                                                 MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                      Gaps
                              230
                                                 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      224
                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

255

```
GLHA_BOVIN
P01217;
21-JUL-1986
23-OCT-1986
01-NOV-1997
                                                                                                                                  PROSITE;
PROSITE;
HORMONE;
SIGNAL
CIRAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                               CORNELL J.S., PIERCE J.G.;
J. BIOL. CHEM. 249:4166-4174(1974).
J. BIOL. CHEM. 249:4166-4174(1974).
-I- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, ECHAIN FOLLTROPIN AND GONADOTROPIN.
EMBL; 200003; E274391; -.
EMBL; 200004; E274391; -.
EMBL; 200004; E274391; JOINED.
EMBL; 200050; G607; -.
PIR; A05132; A05132.
PIR; A05132; A05132.
HSSP; P01215; 1HCN.
                                                                                                                                                                                                                                                                                             MAGHUIN-ROGISTER G., HENNEN G.P.;
EUR. J. BIOCHEM. 21:489-497(1971).
[7]
                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 8-133 FROM N.A.

MEDLINE; 83161058.

NILSON J.H., THOMASON A.R., CSERBAK
J. BIOL. CHEM. 258:4679-4682(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
MEDLINE, 84041490.
GOODWIN R.G., MONCHAN C.L., ROTTMAN F.M.,
NUCLEIC ACIDS RES. 11:6873-6882(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GLYCOPROTEIN HORMONES ALPHA CHAIN PRECURSOR.

CGA.

CGA.

BOS TAURUS (BOVINE).

EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 80-91 AND MEDLINE; 72012932.
                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE; 71
LIAO T.-H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ERWIN C., CROYLE M.L., DONELSON
BIOCHEMISTRY 22:4856-4860(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. MEDLINE; 84024633.
                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY PARTIAL SEQUENCE MEDLINE; 71111429.
                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE OF 25-120.
                                                                                                                                                                                                                                                                                  PRELIMINARY ASSIGNMENT OF DISULFIDE BONDS
                                                                                                                                                                                                                                                                                                                                                               PIERCE
                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EUTHERIA; ARTIODACTYLA.
                                                                                                                                                                                                                                                                                                                                                   ERCE J.G., LIAO T.-H., CARLSEN R.B.,
BIOL. CHEM. 246:866-872(1971).
                                                                                                                                                                                                                                                                                                                                                                                                    BIOL.
                                                                                                                                  PS00779; GLYCO_HORMONE_ALPHA_1; PS00780; GLYCO_HORMONE_ALPHA_2; GLYCOPROTEIN; SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                  71111428.
H., PIERCE J.G.;
CHEM. 246:850-865(1971).
                                                                                                                                                                                                                                                                          7430775
1
35
38
38
56
60
87
106
113
37
120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (REL. 01, 0)
(REL. 02, 1)
(REL. 35, 1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
          120
59
88
110
112
115
115
106
106
137
 13616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
ALPHA CHAIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                 100-120
MW;
                                                                GLYCOPROTEIN HORMONES & BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
         P ->
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
99C153C5 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .
;
         Y (IN REF. )
O (IN REF. )
A (IN REF. )
O -> AZCT (IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                            X.T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MAURER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                              REIMO T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ⋛
          (IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                             MONCMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NILSON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           æ
.:
                252
         REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                            C.E.,
         <u></u>5
                                                                                                                 ALPHA CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                            WOYCHIK R.P
```

```
THE TERM OF THE SECTION OF THE SECTI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 6
HSSP; PO1215; 1HCN.

PROSITE; PS00779; GLYCO_HORMONE_ALPHA_1; 1.

PROSITE; PS007780; GLYCO_HORMONE_ALPHA_2; 1.

PROSITE; PS00780; GLYCO_HORMONE_ALPHA_2; 1.

HORMONE; GLYCOPROTEIN; SIGNAL.

1 24 GLYCOPROTEIN +

CHAIN 25 120 GLYCOPROTEIN +

CHAIN 25 120 BY SIMILARITY.

DISULFID 36 88 BY SIMILARITY.

DISULFID 56 110 BY SIMILARITY.

DISULFID 56 110 BY SIMILARITY.

DISULFID 56 110 BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 25-120.
MEDLINE: 72211144.
LIU W.-K., NAHM H.S.,
WARD D.N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLHA_SHEEP
P01218;
21-JUL-1986
01-APR-1990
01-OCT-1996
                                                                                                                                                                                                                                            WEISSHAAR G., HIYAMA J., RENWICK A.G.C.;
EUR. J. BIOCHEM. 192:741-751(1990).
-I- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROLUTROPIN, FOLLITROPIN AND GONADOTROPIN.
LUTROPIN, FOLLITROPIN AND GONADOTROPIN.
EMBL; X16977; G1366; -.
PIR; X16977; G1366; -.
PIR; A01484; UTSHA.
PIR; S06935; S06935.
PIR; S06935; S06935.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
MEDLINE; 90098887.
BELLO P.A., MOUNTFORD P.S., BRANDON M.R.,
NUCLEIC ACIDS RES. 17:10494-10494(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OVIS ARIES (SHEEP).
EUKARYOTA; METAZOA; CHC
EUTHERIA; ARTIODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-JUL-1986 (REL. 01, CREATED)
01-APR-1990 (REL. 14, LAST SEQUENCE UPDATE)
01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE
GLYCOPROTEIN HORMONES ALPHA CHAIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY ASSIGNMENT OF DISULFIDE BONDS. CHUNG D., SAIRAM M.R., LI C.H.; ARCH. BIOCHEM. BIOPHYS. 159:678-682(1973).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BIOCHEM. J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SAIRAM M.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 25-120.
MEDLINE; 82113052.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE; 73190034.
SAIRAM M.R., PAPKOFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRUCTURE OF CARBOHYDRATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BIOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCPECKLKENKYFSKPDAPIYQCMGCCFSRAYPTPARSKKTMLVPKNITSEATCCVAKAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSY 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BIOCHEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            h 27.5%;
Similarity 77.0%;
67; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAHM H.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      197:535-539(1981).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAPKOFF H.,
BIOPHYS. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   247:4351-4364(1972).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SWEENEY C.M., LAMKIN W.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         , LI C.H.;
153:554-571(1972).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 548; DB 1; L
Pred. No. 4.06e-113;
7; Mismatches 13;
GLYCOPROTEIN HORMONES ALPHA CHAIN.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                UPDATE)
                                                                                                                                                                             4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADAMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BAKER
                                                                                                                                                                                                                                                                                                                                                                                                                         UNIQUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                         BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
RESULT OF THE THE TENT OF THE 
       RESULT
ID GI
AC P
DT 0:
                                                                                                                                                                                         밁
                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Watches 67; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFFIE
                                                                                                                                                    ş
                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GLHA_RABIT
P07474;
01-APR-1988
01-APR-1988
01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE.

SEQUENCE.

SEQUENCE.

J. PROTEIN CHEM. 3:143-156(1984).

-1- SUBGUIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,

CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,
                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORYCTOLAGUS CUNICULUS (RABBIT).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA;
EUTHERIA; LAGOMORPHA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DISULFID
CARBOHYD
CARBOHYD
CONFLICT
CONFLICT
CONFLICT
CONFLICT
SEQUENCE
GLH1_RAT STANDARD; PRT; 120 AA. P11962; P70516; 01-0CT-1989 (REL. 12, CREATED) 01-OCT-1989 (REL. 12, LAST SEQUENCE UPDATE) 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE;
PROSITE;
HORMONE;
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                 DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      170
                                                                                                                                                                                                                               167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            230 NRVTVMGGFKVENHTGCHCSTCYYHKS 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          34
                                                                                                                                                                                           67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94
                                                                                                                                                                                                                                                                   7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCPECKLKENKYFSKPDAPIYQCMGCCFSRAYPTPARSKKTMLVPKNITSEATCCVAKAF 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TKATVMGNVRVENHTECHCSTCYYHKS
                                                                                                                                                                         KAFTKATVMGNAKVENHTECHCSTCYYHKS 96
                                                                                                                                                                                                                                          AMOGCPECKLKENKYFSKLGAPIYQCMGCCFSRAYPTPARSKKTMLVPKNITSEATCCVA 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSY 229
                                                                                                                                                      KSYNRVTVMGGFKVENHTGCHCSTCYYHKS
                                                                                                                                                                                                                             AAPGCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVA
                                                                                                                                                                                                                                                                                                                                                                                             GLYCOPROTEIN.
11 35
D 114 64
D 32 86
D 36 88
D 36 91
D 56 56
D 82 82
                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PS00779; GLYCO_HORMONE_ALPHA_1; 1. PS00780; GLYCO_HORMONE_ALPHA_2; 1.
                                                                                                                                                                                                                                                                                                                                                                              96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (REL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   106
106
27
29
37
112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HORMONES
                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1HRP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ĀĀ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   113
13588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      115
80
106
27
29
37
                                                                                                                                                                                                                                                                                                                   27.4%;
76.7%;
                                                                                                                                                                                                                                                                                                                                                                            10663 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
ALPHA CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CREATED)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₹
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 548; DB 1; Le
Pred. No. 4.06e-113;
7; Mismatches 13;
                                                                                                                                                                                                                                                                                                                   Score 546; DB 1; L. Pred. No. 1.39e-112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 See
                                                                                                                                                                                                                                                                                                                                                                                                                                 78
78
78
78
78
78
                                                                                                                                                                                                                                                                                                   6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . · · · ·
                                                                                                                                                                                                                                                                                                                                                                          CD56D255 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                              Y SIMILARITY.
Y SIMILARITY.
Y SIMILARITY.
Y SIMILARITY.
Y SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY.
                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    zaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (IN REF. 2).
(IN REF. 2).
(IN REF. 2 TO 4).
SC (IN REF. 3).
                                                                                                                                                      256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                   15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 120;
                                                                                                                                                                                                                                                                                                                                    Length 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
Š
                                                                                                                                                                  밁
                                                                                                                                                                                   δÃ
                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 6
                                                        GLHA_BALAC
P37036;
01-JUN-1994 ()
01-JUN-1994 ()
01-OCT-1996 ()
GLYCOPROTEIN
                                                                                                                                                                                                                                                                           CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS00779; GLYCO_HORMONE_ALPHA_1; PROSITE; PS00780; GLYCO_HORMONE_ALPHA_2; HORMONE; GLYCOPROTEIN; SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GLYCOPROTEIN HORMONES ALPHA CHAIN 1 PRECURSOR.
RATTUS NORVEGICUS (RAT).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; RODENTIA.
                 BALAENOPTERA ACUTOROSTRATA (MINKE EUKARYOTA; METAZOA; CHORDATA; VERJEUTHERIA; CETACEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLINE; 89196918.
BURNSIDE J., BUCKLAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE; 82214055.
GODINE J.E., CHIN W.W.,
 SEQUENCE
                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                   SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                 PIR; JT0408; TTRTA.
PIR; S27385; S27385.
                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
STRAIN-WISTAR-IMAMICHI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
STRAIN-SPRAGUE-DAWLEY;
                                                                                                                                                                                                                                                                                                                                                                                                          HSSP; P01233;
                                                                                                                                                                                     170
                                                                                                                                                230
                                                                                                                                                                  94
                                                                                                                                                                                                        34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BIOL. CHEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, LUTROPIN, FOLLITROPIN AND GONADOTROPIN.

L; V01252; G56580; -.

L; y0257; G206111; -.

L; y0259; -; NOT_ANNOTATED_CDS.

L; w25943; G204470; -.

L; w25544; G204471; -.

L; p25545; G20842; -.
                                                                                                                                                          TKATVMGNARVENHTDCHCSTCYYHKS
                                                                                                                                                                                               GCPECKLKENKYFSKLGAPIYQCMGCCFSRAYPTPARSKKTMLVPKNITSEATCCVAKSF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            70:67-74(1988).
                                                                                                                                               NRVTVMGGFKVENHTGCHCSTCYYHKS
                                                                                                                                                                                     GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSY 229
                                                                                                                                                                                                                            Similarity
68; Conse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EZASHI T., HIRAI
I. 7:877-885(1990)
                                                                                                                                                                                                                                                                 25
35
38
56
60
87
80
106
106
                                                        (REL. 29,
1 (REL. 29,
5 (REL. 34,
10 HORMONES
                                                                                                                                                                                                                          27.3%;
larity 78.2%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                         1HRP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HIN W.W., HABENER J.F.;
257:8368-8371(1982).
                                                                                                                                                                                                                                                                   AA;
                                                                                                         STANDARD;
                                                                                                                                                                                                                                                               24
120
59
88
110
112
115
115
106
84
13453
                                                        CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDAT
ALPHA CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ס
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-PITUITARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-ANTERIOR PITUITARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1
                                                                                                                                                                                                                                                                   WW;
                                                                                                                                                                                                                          Score 544; DB 1; Le
Pred. No. 4.78e-112;
6; Mismatches 13;
                                                                                                                                                                                                                                                                                              GLYCOPROTEIN HO
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
PROBABLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHIN W.W.;
                                                                                                                                                                                                                                                                           PROBABLE.
E -> Q (I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KATO
                            (NKE WHALE)
VERTEBRATA;
                                                                                                          PRT;
                                                                                                                                                                                                                                                                 -> Q (IN G206111).
5E507AOD CRC32;
                                                                                                                                               256
                                                                                                                                                                  120
                                                                   UPDATE)
                                                                                                         96
                                     (LESSER RORQUAL)
                                                                                                         A
                                                                                                                                                                                                                                                                                                                                                         HORMONES ALPHA CHAIN
                                                                                                                                                                                                                                             Length 120;
                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                           0
                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                         93
                                                                                                                                                                                                                           0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STITITE TO DESCRIP
                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                            Query Match
Best Local S
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches
                                                                  CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID DISULFID DISULFID DISULFID DISULFID CARBOHYD CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KARASEV V.S
BIOKHIMIIA
-1- SUBUNIT
                                                                                                                                                                                                   SEQUENCE FROM N.A.

MEDLINE; 82214055.

GODINE J.E., CHIM M.W., HABENER J.F.;

J. BIOL. CHEM. 257.8368-8371(1982).

-!- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, LUTROPIN, FOLLITROPIN AND GONADOTROPIN.

EMBL; V01253; G56583; -.

EMBL; V01253; G56583; -.
                                                                                                                                                                                                                                                                                                           GLH2_RAT STANDARD; PRT; 120 AA.
p11963;
01-OCT-1989 (REL. 12, CREATED)
01-OCT-1989 (REL. 12, LAST SEQUENCE UPDATE)
01-JUN-1994 (REL. 29, LAST ANNOTATION UPDATE)
GLYCOPROTEIN HORMONES ALPHA CHAIN 2 PRECURSOR.
RATTUS NORVEGICUS (RAT).
RATTUS NORVEGICUS (RAT).
EUKARROTA; METAZA; CHORDATA; VERTEBRATA; TETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE;
                                                                                                                                                                          PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PIR;
                                                                                                                                                        SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                  HORMONE;
                                                                                                                                                                                                                                                                                                     EUTHERIA; RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HORMONE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          170
                                                                                                                                                                                                                                                                                                                                                                                                                      230
           34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10
                                                                                                                                                                                                                                                                                                                                                                                                                                       70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ASEV V.S., PANKOV Y.A.;

KIHMITA 50:1972-1986(1985).

SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, LUTROPIN, FOLLITROPIN AND GONADOTROPIN.

PNO138; PNO138.
GCPECKLKENKYESKLGAPIYQCMGCCFSRAYPTPARSKKTMLVPKNITSEATCCVAKAF
                                                                                                                                                                                                                                                                                                                                                                                                                   GCPZCKLKZBKYFSKLGAPIYZCMGCCFSRAYPTPARSKKTMLVPKNITSZATCCVAKAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSY 229
                            h 27.1%;
Similarity 77.0%;
67; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
61; Conser
                                                                                                                                                              PS00779; GLYCO_HORMONE_ALPHA_1; PS00780; GLYCO_HORMONE_ALPHA_2; GLYCOPROTEIN; SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PS00779; GLYCO_HORMONE_ALPHA_1; PS00780; GLYCO_HORMONE_ALPHA_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96
                                                                  1
25
35
38
38
56
60
87
106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27.1%;
larity 70.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              114
132
144
156
156
                                                                    Ą
                                                             24
120
59
88
110
1112
1112
1112
1112
1113
106
                                                                                                                                                                                             HCN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HCZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   35
64
86
88
91
91
56
82
                                                                                                                                                                                                                                                                                                           CHORDATA; VERTEBRATA; TETRAPODA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    X.
                                                                   WW;
                           Score 541;
Pred. No. 3.1
7; Mismatcl
                                                                          GLYCOPROTEIN HORMONES A.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
PROBABLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 541; DB 1;
Pred. No. 3.03e-111
13; Mismatches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                84
84
84
84
84
84
84
84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E2CD30DF CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Y SIMILARITY.
Y SIMILARITY.
Y SIMILARITY.
Y SIMILARITY.
Y SIMILARITY.
                                                                   4E4FAB2E
                                                                                                                                                                                                                                                                                                                                                                                                                     256
                                                                                                                                                                                                                                                                                                                                                                                                                                     96
                             Mismatches
                            DB 1; Le
3.03e-111;
ches 13;
                                                                  CRC32;
                                                                                                                                                                          ___
                                               Length 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 96;
                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                             ALPHA CHAIN
                                                                                                                                                                                                                                                                                                            MAMMALIA;
                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                          BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BETA
                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69
         93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
RESULT TO SEE TO
 RESULT
ID GI
AC PO
DT 2:
DT 0
DT 0
DE G
                                                                                                                                                                             Ş
                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                 Matches
                 GLHA_PIG
P01219;
P01219;
21-JUL-1986
01-FEB-1991
01-CCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
MEDLINE; 82060239.
CHIN W.W., KRONENBERG H.M., DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE;
HORMONE;
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHAIN WHICH CONFERS BIOLOGICAL LUTROPIN, FOLLITROPIN AND GONAD EMBL; J00643; G202180; -. EMBL; V00852; G54799; -. EMBL; W22991; -; NOT ANNOTATED_CDS. EMBL; M22992; G575520; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -I- SUBUNIT: HETERÓDIMER OF A COMMON ALPHA CHAIN AND A UNIQUE CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, LUTROPIN, FOLLITROPIN AND GONADOTROPIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GORDON D.F., WOOD W.M.,
DNA 7:679-690(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MUS MUSCULUS (MOUSE).
EUKARYOTA; METAZOA; CHORDATA;
                                                                                                                                                                                                                                                         170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                             230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          230
                                                                                                                                                                                                               94
                                                                                                                                                                                                                                                                                             34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94
                                                                                                                                                                           A01482; TTMSA.
A31598; A31598.
                                                                                                                                                                                                                                                                           GCPECKLKENKYFSKLGAPIYOCMGCCFSRAYPTPARSKKTMLVPKNITSEATCCVAKAF 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NRVTVMGGFKVENHTGCHCSTCYYHKS 256
                                                                                                                                                                                                                                                     GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TKATVMGNARVENHTECHCSTCYYHKS 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSY
                                                                                                                                                                                                                                                                                                                                   Similarity
67; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PS00779; GLYCO_HORMONE_ALPHA_1; PS00780; GLYCO_HORMONE_ALPHA_2; GLYCOPROTEIN; SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RODENTIA.
                     (REL.
                                                                                                                                                                                                                                                                                                                                                                                                          25
35
36
56
60
87
106
                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1HCN.
                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                   STANDARD;
01, CREATED)
17, LAST SEQUENCE UPDATE)
34, LAST ANNOTATION UPDATE)
ONES ALPHA CHAIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                     27.1%;
77.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                              120
59
88
110
112
115
106
                                                                                                                                                                                                                                                                                                                                                                                                            13565 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RIDGWAY
                                                                                                                                                                                                                                                                                                                               Score 541; DB 1; Lv
Pred. No. 3.03e-111;
7; Mismatches 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEE P.C., MALOOF F.,
A. 78:5329-5333(1981).
                                                                                                                                                                                                                                                                                                                                                                                                                                              GLYCOPROTEIN HO
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                  PROBABLE
                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERTEBRATA; TETRAPODA;
                                                                                                                                                                                                                                                                                                                                                                                                          86F1F31A CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               聞.C.;
                                                                                                 120
                                                                                                 ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>, , , </u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HORMONES
                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HABENER
                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ALPHA CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                       229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    229
                                                                                                                                                                                                                                                                                                                                 0
```

GLYCOPROTEIN

HORMONES

```
RESULT
ID GI
AC PI
DT 0:
DT 0:
DT 0:
COC PI
RN [:
                                                                                                                                                                         ş
                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                            Ş
                                                                                                                                                      밁
                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                   CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
               GLHA_STRCA STANDARD; PRT; 96 AA.
P80665;
01-OCT-1996 (REL. 34, CREATED)
01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
GLYCOPROTEIN HORMONES ALPHA CHAIN.
STRUTHIO CAMELUS (OSTRICH).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA;
                                                                                                                                                                                                                                                                                                                                                     PROSITE;
HORMONE;
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                            COMBARNOUS Y., HENNEN G.;
BIOCHEM. SOC. TEANS. 2:915-917(1974).
-!- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,
CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,
                                                                                                                                                                                                                                                                                                                                                                                                    LUTROPIN, FOLLITROPIN AND GONADOTROPIN.
EMBL; D00768; G217699; -.
EMBL; D00767; G217699; JOINED.
PIR; A01485; UTPGA.
PIR; A30339; A30339.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGA.
SUS SCROFA (PIG).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; ARTIODACTYLA.
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 31-120.
MEDLINE; 74075725.
MAGHDIN-ROGISTER G., COMBARNOUS Y.,
EUR. J. BIOCHEM. 39:255-263(1973).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KATO
                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                               HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY ASSIGNMENT OF DISULFIDE BONDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENDOCRINOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLOSSET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY SEQUENCE OF 25-120.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUBMITTED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HIRAI T., TAKIKAWA H., MOL. CELL. ENDOCRINOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. MEDLINE; 89325834.
         PALAEOGNATHAE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                           170
                                                                                                                                  230 NRVTVMGGFKVENHTGCHCSTCYYHKS
                                                                                                                                             34
                                                                                                     15
                                                                                                                                                                        Similarity
67; Conser
                                                                                                                                                                                                                                                                                                                                                                      PS00779; GLYCO_HORMONE_ALPHA_1; 1. PS00780; GLYCO_HORMONE_ALPHA_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EZASHI T.,
) (MAR-1992)
                                                                                                                                                                                                                                                                                                                                                               GLYCOPROTEIN;
                                                                                                                                                                                                                                                         25
35
38
38
56
60
87
80
106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MAGHUIN-ROGISTER G., EXP. 8:164(1974).
                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                           AA;
          STRUTHIONIFORMES
                                                                                                                                                                                                                           27.18;
77.08;
                                                                                                                                                                                                                                                                    120
59
88
110
112
115
115
106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HIRAI T., KATO T.;
) TO EMBL/GENBANK/DDBJ DATA BANKS.
                                                                                                                                                                                                                                                           13532 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KATO Y.;
63:209-217(1989).
                                                                                                                                                                                                                                                                                                                                                               SIGNAL.
                                                                                                                                                                                                                          Score 541; DB 1; L
Pred. No. 3.03e-111;
                                                                                                                                                                                                                                                                                      GLYCOPROTEIN HORMONES ALPHA CHAIN. BY SIMILARITY. BY SIMILARITY. BY SIMILARITY. BY SIMILARITY. BY SIMILARITY.
                                                                                                                                                                                                                                                         8749DBA5 CRC32;
                                                                                                                                  256
                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HENNEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HENNEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ດ
:
                                                                                                                                                                                                                  13;
                                                                                                                                                                                                                                     Length 120;
                                                                                                                                                                                                                  Indels
                    AVES;
                                                                                                                                                                                                                  0
                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                 0
```

```
SO STATE THE STATE OF STATE OF
Search completed: Wed May Job time: 35 secs.
                                                                                                                   ş
                                                                                                                                                                               밁
                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                      당
                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE.

MEDLINE; 97025333.

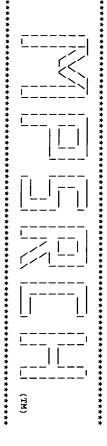
KOIDE Y., PAPKOFF H., KAWAUCHI H.;

EUR. J. BIOCHEM. 240:262-267(1996).

-i- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,

LUTROPIN, FOLLITROPIN AND GONADOTROPIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HORMONE;
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS00779; GLYCO_HORMONE_ALPHA_1;
PROSITE; PS00780; GLYCO_HORMONE_ALPHA_2;
                                                                                                                                                                                                                                          170
                                                                                                                      230
                                                                                                                                                                               70
                                                                                                                                                                                                                                                                                                      10
                                                                                                                                                      TKITLKDNVKIENHTECHCSTCYYHKS
                                                                                                                                                                                                                                                                             GCPECKLGENRFFSKPGAPVYQCTGCCFSRAYPTPLRSKKTMLVPKNITSEATCCVAKAF 69
                                                                                                                      NRVTVMGGFKVENHTGCHCSTCYYHKS
                                                                                                                                                                                                                                          GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSY 229
                                                                                                                                                                                                                                                                                                                                                                 Similarity
65; Conse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11
32
33
56
82
                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                             27.08;
74.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10781 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          σ
                               08:48:07 1998
                                                                                                                                                                                                                                                                                                                                                              Score 538; DB 1; La
Pred. No. 1.92e-110;
10; Mismatches 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DDF7B4BB CRC32;
                                                                                                                      256
                                                                                                                                                                               96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22
                                                                                                                                                                                                                                                                                                                                                                                                                      Length 96;
                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                 0;
```

#### THIS PAGE BLANK (USPTO)



Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Wed May 6 08:47:32 1998; MasPar time 7.91 Seconds 811.687 Million cell updates/sec

Tabular output not generated.

>US-08-804-166-2 (1-256) from US08804166.pep 1994

Description: Perfect Score: Sequence: SRTSLLLAFGLLCLPWLQEG......GFKVENHTGCHCSTCYYHKS 256

Scoring table: PAM 150 Gap 11

Searched:

69112 seqs, 25083644 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database: swiss-prot35 1:swiss1

Statistics: Mean 42.029; Variance 63.165; scale 0.665

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result	Score	Query Match	Query Match Length	80	ID	Description	Pred. No.
_	1124	56.4	455	_ ;	TNR1_HUMAN	TUMOR NECROSIS FACTOR	3.58e-271
2	962	48.2	461	_		NECROSIS	3.53e-226
ω	841	42.2	454	ᆫ	TNR1_MOUSE	NECROSIS	
4	809	40.6	461	ب	TNR1_RAT		
u	667	33.5	116	سر	GLHA_HUMAN	GLYCOPROTEIN HORMONES	3.28e-145
σ	551	27.6	120	Ь	GLHA_MACMU		6.39e-114
7	548	27.5	120	Ц	GLHA_BOVIN	GLYCOPROTEIN HORMONES	4.06e-113
8	548	27.5	120	ــر	GLHA_SHEEP	GLYCOPROTEIN HORMONES	4.06e-113
9	546	27.4	96	_	GLHA_RABIT	GLYCOPROTEIN HORMONES	1.39e-112
10	544	27.3	120	Н	GLH1_RAT	GLYCOPROTEIN HORMONES	4.78e-112
11	541	27.1	96	μ.	GLHA_BALAC	GLYCOPROTEIN HORMONES	3.03e-111
12	541	27.1	120	Ľ	GLH2_RAT	GLYCOPROTEIN HORMONES	3.03e-111
13	541	27.1	120	ب	GLHA_MOUSE	GLYCOPROTEIN HORMONES	3.03e-111
14	541	27.1	120	_	GLHA_PIG	GLYCOPROTEIN HORMONES	3.03e-111
15	538	27.0	96	_	GLHA_STRCA	GLYCOPROTEIN HORMONES	1.92e-110
16	539	27.0	120	_	GLHA_CALJA	GLYCOPROTEIN HORMONES	1.04e-110
17	537	26.9	120	Н	GLHA_MELGA	GLYCOPROTEIN HORMONES	3.55e-110
18	535		96	μ	GLHA_PHYCA	GLYCOPROTEIN HORMONES	1.22e-109
19	507		118	۳	GLH2_CYPCA	GLYCOPROTEIN HORMONES	3.54e-102
20	503		120		GLHA_EQUAS	GLYCOPROTEIN HORMONES	4.10e-101
21	501	25.1	96	<b>-</b>	GLHA_HORSE	GLYCOPROTEIN HORMONES	1.39e-100
22	500	25.1	118	_	GLHA_HYPMO	GLYCOPROTEIN HORMONES	2.57e-100
23	500	25.1	118	_	GLH1_CYPCA	GLYCOPROTEIN HORMONES	2.57e-100

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	4
183	188	204	207	207	212	214	215	221	225	231	273	377	424	427	447	448	474	476	478	499	
9.2	9.4	10.2	10.4	10.4	10.6	10.7	10.8	11.1	11.3	11.6	13.7	18.9	21.3	21.4	22.4	22.5	23.8	23.9	24.0	25.0	
595	323	260	427	425	474	349	415	326	325	435	417	125	117	94	108	114	117	97	93	116	H
۳	۳	۲	۲	۲	۲	<u> </u>	Н	Ь	Н	ш	Ь	μ.	Ь	<b></b> -	μ		_	1	_	1	۲
CD30_HUMAN	FASA_BOVIN	CD27_HUMAN	NGFR_HUMAN	NGFR_RAT	TNR2_MOUSE	VC22_VARV	TNRC_MOUSE	VT2_MYXVL	VT2_SFVKA	TNRC_HUMAN	WSL1_HUMAN	GLHA_FUNHE	GLHA_ACALA	GLHA_THUOB	GLH1_ONCKE	GLH2_ONCKE	GLHA_ANGAN	GLHA_RANCA	GLHA_MURCI	GLHA_CLAGA	CTDO CTDIO
CD30L RECEPTOR PRECURS	FASL RECEPTOR PRECURSO	CD27L RECEPTOR PRECURS	LOW-AFFINITY NERVE GRO	LOW-AFFINITY NERVE GRO	TUMOR NECROSIS FACTOR	PROTEIN C22/B28 HOMOLO	LYMPHOTOXIN-BETA RECEP	TUMOR NECROSIS FACTOR	TUMOR NECROSIS FACTOR	LYMPHOTOXIN-BETA RECEP	WSL-1 PROTEIN PRECURSO	GLYCOPROTEIN HORMONES	CHICALIVITATION TOTAL								
2.06e-20	1.52e-21	3.21e-25	6.44e-26	6.44e-26	4.37e-27	1.49e-27	8.65e-28	3.33e-29	3.76e-30	1.40e-31	8.97e-42	4.56e-68	2.80e-80	4.60e-81	2.62e-86	1.43e-86	1.99e-93	5.90e-94	1.74e-94	4.73e-100	4. U/0 TOO

### ALIGNMENTS

R R R R	R R R R R R	RA RA	RA ARA	R R R R R R R R R R R R R R R R R R R	RE RE RE	8 0 0 0 S E	RESULT ID T AC P DT 0 DT 0
TO I SEQUENCE FROM N.A. SEQUENCE FROM N.A. MEDIINE; 92250049. FUCHS P., STREHL S., DWORZAK M., HIMMLER A., AMBROS P.F.;	SEQUENCE FROM N.A. TISSUB-PLACENTA; MEDLINE; 91017509.  GRAY P.W., BARRETT K., CHANTRY D., TURNER M., FELDMAN M.; GRAY P. M., BARRETT K., CHANTRY D., TURNER M., FELDMAN M.; PROC. NATL. ACAD. SCI. U.S.A. 87:7380-7384(1990).	SEQUENCE FROM N.A.  MEDLINE; 91090841.  HIMMLER A., MAURER-FOGY I., KROENKE M., SCHEURICH P., PFIZENMAIER K.,  LANTZ M., OLSSON I., HAUPTMANN R., STRATOWA C., ADOLF G.R.;  LANTZ M., OLSSON I., HAUPTMANN R., STRATOWA C., ADOLF G.R.;  LANTZ M., OLSSON I., HAUPTMANN R., STRATOWA C., ADOLF G.R.;  LANT LANT LANT LANT LANT LANT LANT LANT	SEQUENCE FROM N.A., AND SEQUENCE OF 41-53; 110-124 AND 199-201. MEDLINE; 91006021. NOPHAR Y., KEMPER O., BRAKEBUSCH C., ENGELMANN H., ZWANG R., ADERKA D., HOLTMANN H., WALLACH D.; EMBO J. 9:3269-3278(1990).	SEQUENCE FROM N.A.  SEQUENCE FROM N.A.  MEDLINE; 90235284.  LOETSCHER H., PAN YC.E., LAHM HW., GENTZ R., BROCKHAUS M.,  TABUCHI H., LESSLADER W.;  CELL 61:351-359(1990).	SEQUENCE FROM N.A.  SEQUENCE FROM N.A.  TISSUE-PLACENTA;  MEDLINE; 90235285.  MEDLINE; 90235285.  SCHALL T.J., LEWIS M., KOLLER K.J., LEE A., RICE G.C., WONG G.H.W.,  SCHALL T.J., LEWIS M., KOLLER K.J., RAAB H., KOHR W.J., GOEDDEL D.V.;  GETANAGA T., GRANGER G.A., LENTZ R., RAAB H., KOHR W.J., GOEDDEL D.V.;  CELL 61:361-370(1990).	BINDING PROTEIN 1) (TBPI) (P60) (TNF-R1) (P55) (CD120A). THERI OR THEAR. HOMO SAPIENS (HUMAN). EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA; EUTHERIA; PRIMATES.	NRI_HUMAN STANDARD; PRT; 455 19438; 1-FEB-1991 (REL. 17, CREATED) 1-FEB-1991 (REL. 17, LAST SEQUENCE UPDAT 1-NOV-1997 (REL. 35, LAST ANNOTATION UPD 1-NOV-1997 (REL. 35, RECEPTOR 1 PRECURSO

```
-I- SUBCELULAR LOCATION: TYPE I MEMBRANE PROTEIN.
-I- SIMILARITY: CONTAINS A LA-NGFR/TNFR-TYPE CYSTEINE
EMBL; X55313; G37224; -.

EMBL; M5526; G339745; -.

EMBL; M63121; G339756; -.

EMBL; M75866; G339750; -.

EMBL; M75866; G339750; JOINED.

EMBL; M75866; G339750; JOINED.

EMBL; M75866; G339750; JOINED.

EMBL; M75865; G339750; JOINED.

EMBL; M75865; G339750; JOINED.

EMBL; M75865; G339750; JOINED.

R EMBL; M75865; G339750; JOINED.

R EMBL; M34899; G9HUT1.

R PIR; A34899; G9HUT1.

R PIR; A35010; A35010.

R PIR; A35010; A35010.

R PIR; A36208; A39205.
REPEAT
REPEAT
REPEAT
DOMAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                   TRANSMEM
DOMAIN
DOMAIN
REPEAT
                                                                                                                                                                  SIGNAL
CHAIN
CHAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RECRUITS CASPASE-8 TO THE ACTIVATED RECEPTOR. THE RESULTING AGGREGATE CALLED THE DEATH-INDUCING SIGNALING COMPLEX (DISC) PERFORMS CASPASE-8 PROTEOLYTIC ACTIVATION WHICH INITIATES THE SUBSEQUENT CASCADE OF CASPASES (ASPARTATE-SPECIFIC CYSTEINE PROTEASES) MEDIATING APOPTOSIS.

-I- SUBUNIT: THE BINDING TO THE EXTRACELLULAR DOMAIN OF THERI LEADS TO HOMOTRIMERIZATION. ONCE AGGREGATED THE RECEPTORS DEATH DOMAINS PROVIDE A NOVEL MOLECULAR INTERFACE THAT INTERACTS SPECIFICALLY WITH THE DEATH DOMAIN OF TRADD. VARIOUS TRADD-INTERACTING PROTEINS SUCH AS TRAFES, RIP AND POSSIBLY FADD, ARE RECRUITED TO THERI COMPLEX BY THEIR ASSOCIATION WITH TRADD. THIS COMPLEX AND THE ASSOCIATION WITH TRADD. ARE RECRUITED TO THERI COMPLEX BY THEIR ASSOCIATION WITH TRADD. ARE RECRUITED TO THERE ASSOCIATION WITH TRADD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE; 97094982.
NAISMITH J.H., DEVINE T.O.,
STRUCTURE 4:1251-1262(1996)
-!- FUNCTION: RECEPTOR FOR 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CELL
                                                                                                                                                                                                                                      PROSITE; PS00652; TNFR_NGFR_1; 3.
PROSITE; PS50050; TNFR_NGFR_2; 3.
PROSITE; PS50017; DEATH_DOMAIN; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            X-RAY CRYSTALLOGRAPHY (1.85 ANGSTROMS) OF 41-202.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BANNER D.W.,
BROGER C., L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE; 93258809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   X-RAY CRYSTALLOGRAPHY (2.85 ANGSTROMS) OF 30-211.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ENGELMANN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 41-45
MEDLINE; 90110215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENOMICS 13:219-224(1992).
[7]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BIOL. CHEM. 265:1531-1536(1990).
                                                                                                                                                                                                                                                                                     1TNR; 31-JUL-94
1NCF; 07-DEC-95
1EXT; 11-JAN-97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     73:431-445(1993).
                                                                                                                                                                                                                            TRANSMEMBRANE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOETSCHER H.,
D'ARCY A., JANES W., GENTZ R., SCHOENFELD H.-J.,
GLYCOPROTEIN; REPEAT; SIGNAL; APOPTOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LESSLAUER
                                                                              CYTOPLASMIC (POTENTIAL).

4 X THER-CYS.
THER-CYS 1.
THER-CYS 2.
THER-CYS 3.
THER-CYS 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KHONO H.,
                                                                                                                                                     TUMOR NECROSIS FACTOR RECEPTOR 1.
TUMOR NECROSIS FACTOR BINDING PROTEIN
EXTRACELLULAR (POTENTIAL).
POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
..
                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SPRANG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CYSTEINE-RICH REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APOPTOSIS AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
```

```
A COCCARRANT DO COCCACACACA PROCESTA PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ANDLINE: 96011645.

AN SUTER B., PAULI U.H.;

GENE 153:263-266(1995).

C. -!- FUNCTION: RECEPTOR FOR THE ACTIVATED RECEPTOR. THE RESULTING

C. -!- FUNCTION: RECEPTOR FOR THE ACTIVATED RECEPTOR. THE RESULTING

C. RECRUITS CASPASE-8 TO THE DEATH-INDUCING SIGNALING COMPLEX (DISC)

C. AGGREGATE CALLED THE DEATH-INDUCING SIGNALING COMPLEX

C. AGGREGATE CALLED THE DEATH-INDUCING SIGNALING COMPLEX

C. PERFORMS CASPASE-8 PROTEDLYTIC ACTIVATION WHICH INITIATES THE

C. PERFORMS CASPASE-8 PROTEDLYTIC ACTIVATION WHICH INITIATES THE

C. SUBSEQUENT CASCADE OF CASPASES (ASPARTANTE-SPECIFIC CYSTEINE

C. SUBSEQUENT CASCADE OF CASPASES (ASPARTANTE-SPECIFIC CYSTEINE

C. PROTEASES) MEDIATING APPOTOSIS (BY SIMILARITY).

C. INDURITY THE BINDING TO THE EXTRACELLULAR COMAIN OF TNERL COMPLEX TO

C. HOMOTRIMERIZATION. ONCE AGGREGATED THE RECEPTORS DEATH DOMAINS

C. PROVIDE A NOVEL MOLECULAR INTERACE THAT INTERACTS SPECIFICALLY

C. PROVIDE A NOVEL MOLECULAR INTERACE THAT INTERACTS SPECIFICALLY

C. PROVIDE SUBCLIVE AS TRAFS, RIP AND POSSIBLY FADD. ARE RECRUITED TO

THE THE DEATH DOMAIN OF TRADD. VARIOUS TRADD. THESEACTING

C. PROTIVATES AT LEAST TWO DISTINCT SIGNALING CASCADES, APOPTOSIS AND

C. SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN.

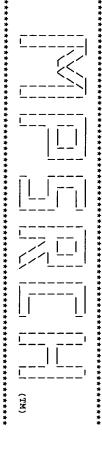
PROSITE; PSO055; THER_NGFR_1; 3.

PROSITE; PSO055; THER_NGFR_1; 3.

PROSITE; PSO055; THER_NGFR_1; 3.

PROSITE; PSO055; THER_NGFR_1; 3.

PROSITE; PSO055; THER_NGFR_1; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 14
         SIGNAL
CHAIN
DOMAIN
TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DISULFID DISULFID DISULFID DISULFID DISULFID DISULFID DISULFID DISULFID DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TNFR1.
SUS SCROFA (PIG).
SUS SCROFA (PIG).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TNR1_PIG
P50555;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-OCT-1996 (REL. 34, CREATED)
01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
TUMOR NECROSIS FACTOR RECEPTOR 1 PRECURSOR (P60) (INF-R1) (P55).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                              RECEPTOR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE-KIDNEY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            143 KONTYCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  161 KQNTVCTCHAGFFLRENECVSCS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                              TRANSMEMBRANE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        127
146
149
168
182
185
185
145
145
143
         22
22
21
211
234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
         461
210
233
461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        56.4%;
99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               50494
                                                                                                                           GLYCOPROTEIN; REPEAT; SIGNAL; APOPTOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1124; DB 1;
Pred. No. 3.58e-271;
1; Mismatches 0;
POTENTIAL.
TUMOR NECROSIS FACTOR RECEPTOR 1.
EXTRACELLULAR (POTENTIAL).
POTENTIAL.
CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POTENTIAL.
MISSING (IN REF. 4).
GPAA -> APP (IN REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CECEAOGF CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                461 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ٥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                       AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```



Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm

Tabular output not generated. Run on: Wed May 6 08:48:26 1998; MasPar time 13.91 Seconds 775.210 Million cell updates/sec

Description: Perfect Score:

Sequence: >US-08-804-166-2 (1-256) from US08804166.pep 1994 1 SRTSLLLAFGLLCLPWLQEG......GFKVENHTGCHCSTCYYHKS 256

Scoring table: PAM 150 Gap 11

Searched: 140555 seqs, 42109429 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database:

sptremb15
1:sp\_fung1 2:sp\_human 3:sp\_invertebrate 4:sp\_mammal
5:sp\_mhc 6:sp\_organelle 7:sp\_phage 8:sp\_plant
9:sp\_bacter1a 10:sp\_rodent 11:sp\_virus 12:sp\_vertebrate
13:sp\_unclassified

Statistics: Mean 41.143; Variance 64.343; scale 0.639

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result	Score	Query Match	Length	BB	ID	Description	Pred. No.
μ.,	945	47.4	180	. ۔	Q95185	TUMOUR NECROSIS FACTOR	3.15e-213
ນ	895	44.9	471	4	019131	ч	6.13e-200
ω	454	22.8	108	12	Q90287	GONADOTROPIN ALPHA SUB	6.53e-85
4	453	22.7	107	12	Q90286	GONADOTROPIN ALPHA SUB	1.17e-84
ъ	451	22.6	119	12	Q91370	GONADOTROPHIN ALPHA 1	3.76e-84
σ	446	22.4	114	12	Q91371	GONADOTROPHIN ALPHA 2	6.95e-83
7	433	21.7	117	12	Q91119	GLYCOPROTEIN HORMONES	1.34e-79
8	333	16.7	55	10	Q62589	ALPHA SUBUNIT OF GLYCO	1.06e-54
v	273	13.7	253	N	000276	LYMPHOCYTE ASSOCIATED	3.29e-40
10	273	13.7	380	N	000280	LYMPHOCYTE ASSOCIATED	3.29e-40
11	273	13.7	418	N	000275	LYMPHOCYTE ASSOCIATED	3.29e-40
12	257	12.9	277	N	014866	SOLUBLE DEATH RECEPTOR	2.00e-36
13	257	12.9	426	N	014865	DEATH RECEPTOR 3 BETA.	2.00e-36
14	214	10.7	348	ដ	Q85407	HOMOLOG OF VACCINIA VI	1.76e-26
15	214	10.7	349	끔	Q89118	SOMALIA-1977 RIGHT NEA	1.76e-26
16	214	10.7	349	;	860680	GARCIA-1966 RIGHT NEAR	1.76e-26
17	210	10.5	355	11	Q85308	SECRETED RECEPTOR BIND	1.42e-25
18	206	10.3	459	10	Q62327	TUMOR NECROSIS FACTOR	1.13e-24
19	187	9.4	267	4	002764	OX40 PRECURSOR (FRAGME	1.89e-20
20	182	9.1	259	N	014755	TRAIL RECEPTOR 3.	2.34e-19

45	44	43	42	41	40	39	38	37	36	ω 5	34	ω ω	32	31	30	29	28	27	26	25	24	23	22	21	
143	146	148	147	150	152	153	153	154	156	155	160	160	161	167	167	174	174	174	174	174	178	179	180	180	
7.2	7.3	7.4	7.4	7.5			7.7	7.7	7.8	7.8	8.0	8.0	8.1	8.4	8.4	8.7	8.7	8.7	8.7	8.7	8.9	9.0	9.0	9.0	
212	217	401	217	274			401	199	372	217	245	202	468	217	202	440	440						299	283	
4	4	10	4	N	10	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	10	N	N	N	
Q07368	Q07369	008727	Q07367	Q13663	008712	035305	000300	Q14406	000279	Q14407	014644	014643	000220	Q16631	Q14405	014763	015531	014720	015517	015508	Q63199	Q16042	014798	Q92956	
SOMATOTROPIN 2 PRECURS	SOMATOTROPIN 3 PRECURS	OSTEOPROTEGERIN.	SOMATOTROPIN 1 PRECURS	CELL SURFACE ANTIGEN O	OSTEOPROTEGERIN.	RANK.	OSTEOPROTEGERIN.	CHORIONIC SOMATOMAMMOT	LYMPHOCYTE ASSOCIATED	CHORIONIC SOMATOMAMMOT		PLACENTAL GROWTH HORMO	CYTOTOXIC LIGAND TRAIL	SOMATOTROPIN PRECURSOR	SOMATOTROPIN PRECURSOR	APOPTOSIS INDUCING REC	APOPTOSIS INDUCING PRO	DEATH RECEPTOR 5.	CYTOTOXIC TRAIL RECEPT	P53-REGULATED DNA DAMA	FAS ANTIGEN PRECURSOR.	TUMOR NECROSIS FACTOR	CYTOTOXIC TRAIL RECEPT	HERPESVIRUS ENTRY MEDI	
3.82e-11	9.42e-12	•	•	1.43e-12	5.55e-13	3.45e-13	3.45e-13	2.14e-13	8.23e-14	1.33e-13	1.20e-14	1.20e-14	7.40e-15	3.98e-16	3.98e-16	1.27e-17	1.27e-17	1.27e-17	1.27e-17	1.27e-17	1.73e-18	1.05e-18	•	6.38e-19	

#### ALIGNMENTS

RESULT ID O AC O DT 0	Qy Qy	Db Qy	Дb	Ма Ма	SO THE CONTRACTOR OF THE CONTR	18 8 8 8 8 B	g p p p ac	RESULT
LT 2 019131 PRELIMINARY; PRT; 471 AA. 019131; 01-JAN-1998 (TREMBLREL. 05, CREATED)	165 TVCTCHAGFFLRGNEC 180 	105 KCRKEMYQVEISPCTVYRDTVCGCRKNQYRYYMSETHFQCLNCSLCLNGTVQISCKETQN 164 	45 CPQGKYIHPQDNSICCTKCHKGTYLYNDCAGPGLDTDCRECENGTFTASENYLRQCLSCS 104	Query Match 47.4%; Score 945; DB 4; Length 180; Best Local Similarity 86.0%; Pred. No. 3.15e-213; Matches 117; Conservative 9; Mismatches 10; Indels 0; Gaps 0;	SEQUENCE FROM N.A.  SEQUENCE FROM N.A.  DUTHLE S., NASIR L., ECKERSALL P.D.;  DUTHLE S., NASIR L., ECKERSALL P.D.;  SUBMITTED (OCT-1996) TO EMBL/GENBANK/DDBJ DATA BANKS.  EMBL; U72344; G1613880;  PROSITE; PS00652; TMFR_NGFR_1; 3.  NON_TER 1 1  NON_TER 180  NON_TER 180  AA; 20399 MW; 5452A6B2 CRC32;	(CAT). ORDATA; VI	Q95185; 01-FEB-1997 (TREMBLREL. 02, CREATED) 01-FEB-1997 (TREMBLREL. 02, LAST SEQUENCE UPDATE) 01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE) 01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE) TUMOUR NECROSIS FACTOR RECEPTOR P60 (FRAGMENT)	LT 1 Q95185 PRELIMINARY; PRT; 180 AA.

```
RESULT
ID QS
          5555
                                                                                                                                                                                                                                   ş
                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOR RECOCCE DE COCCE 
                                                                                                                                 ä
                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STIP DR RR RR OCC DE TRACE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
     Q90286;
01-NOV-1996
01-NOV-1996
01-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q90287;
01-NOV-1996 (TREMBLREL. 01, CREATED)
01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
01-NOV-1996 (TREMBLREL. 01, LAST ANNOTATION UPDATE)
GONADOTROPIN ALPHA SUBUNIT (FRAGMENT).
CARASSIUS AURATUS (GOLDFISH).
CURANSTUS AURATUS (GOLDFISH).
CURANSTUS AURATUS (GOLDFISH).
CURANSTOTA; METAZOA; CHORDATA; VERTEBRATA; PISCES; GNATHOSTOMATA;
OSTEICHTHYES; ACTINOPTERYGII; CYPRINIFORMES.
                                                                                                                                 Q90286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LT 3
Q90287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KOBAYASHI M., KATO Y., YOSHIURA Y., AIDA K.;
SUBMITTED (AUG-1996) TO EMBL/GENBANK/DDBJ DATA BANKS
EMBL; D86552; G1469838; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LEE E.-K., TALYOR M.J., KEHRLI M.E.;
SUBMITTED (AUG-1997) TO EMBL/GENBANK/DDBJ DATA
EMBL; U90937, G2290398, --
PROSITE; PS00652; TMFR_NGFR_1; 3.
SEQUENCE 471 AA; 51368 MW; 1D60FF4A CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BOS TAURUS (BOVINE).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; ARTIODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JAN-1998
01-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE-AORTA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TUMOR NECROSIS
                                                                                                                                                                                                                                                                                                                                     170
                                                                                                                                                                                                                                   230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 161
                                                                                                                                                                                                                                                                                                                                                  28 GCEECKLKENNIFSKPGAPVYQCMGCCFSRAYPTPLRSKKTMLVPKDITSEATCCVAKEV 87
                                                                                                                                                                                                                                                                                 88
                                                                                                                                                                                                                                                                                                                                                                                                                               Match 22.8%;
Local Similarity 72.0%;
les 59; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41 ESPCPQGKYNHPQNSTICCTKCHKGTYLYNDCPGPGRDTDCRVCAPGTYTALENHLRRCL 100
                                                                                                                                                                                                                                                                                                                               GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KONTVCTCHAGFFLRENECVSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SCSRCRDEMFQVEISPCVVDRDTVCGCRKNQYREYWGETGFRCLNCSLCPNGTVNIPCQE 160
                                                                                                                                                                                                                                NRVTVMGGFKVENHTGCHCSTC
                                                                                                                                                                                                                                                                              KRVLV-DDVKLVNHTDCHCSTC 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RODTICHCHMGFFLKGAKCISC 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   h 44.98;
Similarity 73.28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    108
108 AA;
  (TREMBLREL.
(TREMBLREL.
(TREMBLREL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TREMBLREL. 05, LAST SEQUENCE UPDATE)
(TREMBLREL. 05, LAST ANNOTATION UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FACTOR-RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    108
12129 MW;
     22,5
CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                               Score 454; DB 12; 1
Pred. No. 6.53e-85;
7; Mismatches 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 895; DB 4; I
Pred. No. 6.13e-200;
21; Mismatches 17;
                                                                                                                                                                                                                                251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                164
                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B2B1A212 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches 17; Indels
                                                                                                                              107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ⋛
                                                                                                                              ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 471;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 108;
                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                               ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                               ۲
```

```
RESULT
ID QS
 Ş
                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                SORRERR COSE DITOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STIPRERROCOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                      GEN K., PROCESTIOL. 11:265-2/3(17).

J. MOL. ENDOCRINOL. 11:265-2/3(17).

EMBL; S62773; G546258; -.

EMBL; S692773; G546258; -.

PROSITE; PS00779; GLYCO_HORMONE_ALPHA_2; 1.

PROSITE; PS00780; GLYCO_HORMONE_ALPHA_2; 1.

PROSITE; PS00780; GLYCO_HORMONE_ALPHA_2; 1.
                   Q91371;
01-NOV-1996 (TREMBLREL. 01, CREATED)
01-NOV-1996 (TREMBLREL. 05, LAST SEQUENCE UPDATE)
01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
60NADOTROPHIN ALPHA 2 SUBUNIT.
0NCORHYNCHUS MASOU (CHERRY SALMON) (MASU SALMON).
EUKARYOTA; METAZOA: CHORDATA; VERTEBRATA; PISCES; G
OSTEICHTHYES; ACTINOPTERYGII; SALMONIFORMES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q91370;
Q1-NOV-1996 (TREMBLREL. 01, CREATED)
Q1-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
Q1-NOV-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
Q1-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
Q0NADOTROPHIN ALPHA 1 SUBUNIT.
QNCORHYNCHUS MASOU (CHERRY SALMON) (MASU SALMON).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; PISCES; GNATHOSTOMATA;
QSTEICHTHYES; ACTINOPTERYGII; SALMONIFORMES.
                                                                                                                                                          LT 6
Q91371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GEN K., MARUYAMA O., KATO T., TOMIZAWA K., J. MOL. ENDOCRINOL. 11:265-273(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KOBAYASHI M., KATO Y., YOSHIURA Y., AIDA K.;
SUBMITTED (AUG-1996) TO EMBL/GENBANK/DDBJ DATA BANKS.
EMBL; D86551; G1469836; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GONADOTROPIN ALPHA SUBUNIT (FRAGMENT).
CARASSIUS AURATUS (GOLDFISH).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; PISCES; GNATHOSTOMATA;
OSTEICHTHYES; ACTINOPTERYGII; CYPRINIFORMES.
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. MEDLINE; 94197892.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NON_TER
                                                                                                                                                                                                                                                                        170 GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKIMLVQKNVTSESTCCVAKSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       170 GCPECTIQENPETSQPGAPIIQCMGCCFSRAYPIPLRSKTMIVQKNVTSESTCCVAKSY 229
                                                                                                                                                                                                                     230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 230
                                                                                                                                                                                                                34 GCEECKLKENKLFSNPGAPVYQCTGCCFSRAYPTPLQSKKAMLVPKNITSEATCCVAKEG
                                                                                                                                                                                                                                                                                                                           22.68;
Local Similarity 67.88;
les 59; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87 KRVLV-NDVRLVNHTDCHCSTC 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27 GCEECKLKENNIFSKPGAPVYQCMGCCFSRAYPTPLRSKKTMLVPKNITSEATCCVAKEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NRVTVMGGFKVENHTGCHCSTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              n 22.7%;
Similarity 72.0%;
59; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       107
107 AA;
                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       107
11959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 453; DB 12;
Pred. No. 1.17e-84;
7; Mismatches 15
                                                                                                                                                                                                                                                                                                                               Score 451; DB 12;
Pred. No. 3.76e-84;
11; Mismatches 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 251
                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         880C6840
                                                                                                                                                          114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CRC32;
                                                                                                                                                          ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ⋛
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WAKABAYASHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15;
                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                        GNATHOSTOMATA;
                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                               119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            107;
                                                                                                                                                                                                                                                                                                                                  ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                KATO Y.;
                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                       93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ۲.
```

```
RESULT 7
ID Q91119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SORDRER
õ
                 В
                                    ş
                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local :
                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q91119;
01-NOV-1996;
01-NOV-1996;
01-JAN-1998;
                                                                                                                         DISULFID
CARBOHYD
CARBOHYD
                                                                                                                                                               DISULFID DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                      CHAIN) (GTH-ALPHA).

MORONE SAXATILIS (STRIPED BASS)

EUKARYOTA, METAZOA; CHORDATA; VI

OSTEICHTHYES; ACTINOPTERYGII; P.
                                                                                                                                                                                                                                                                                                                                                   TISSUE-PITUITARY GIMEDLINE; 96020549.
                                                                                                                                                                                             CHAIN
                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                              GLYCOPROTEIN HORMONES ALPHA
                                                                                                                                                       DISULFID
                                                                                                                                                                                                                                                                                 SUBMITTED (AUG-1997) TO
                                                                                                                                                                                                                                                                                            HASSIN
                                                                                                                                                                                                                                                                                                    TISSUE-PITUITARY GLAND;
                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                           HASSIN S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE;
                                                                                                                 SEQUENCE
                                                                                                                                                                                                        SIGNAL
                                                                                                                                                                                                                HORMONE;
                                                                                                                                                                                                                          PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              230
 229
                                      170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32 GCEECTLKPUTIF--PN--IIQCTGCCFSRAYPTPLRSKQTMLVPKNITSEATCCVAKEG
                   92
                                                        33
                                                                                   Local
                                                                                                                                                                                                                                 SIMULARITY).
SIBUNIT: HETERODIMER OF AN ALPHA AND A BETA
SUBUNIT: G2322657; -.
L; L35071; G2322657; -.
                                                                                                                                                                                                                                                                       FUNCTION: INVOLVED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ERVITKDGFPVINHTECHCSTCYYHKS 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSY 229
YNRVTVMGGFKVENHTGCHCSTCYYHK
           YE-TEV-AGIKVRNHTDCHCSTCYFHK 116
                                              GCEECTLRKNSVFSR-DRPVYQCMGCCFSRAYPTPLKAMKTMTIPKNITSEATCCVAKHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NRVTVMGGFKVENHTGCHCSTCYYHKS
                                    GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAK-S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
62; Conser
                                                                                                                                                                                                                                                                                                                                ENDOCRINOL.
                                                                           Similarity 57; Conser
                                                                                                                                                                                                                       PS00779; GLYCO_HORMONE_ALPHA_1; PS00780; GLYCO_HORMONE_ALPHA_2;
                                                                                                                                                                                                                GLYCOPROTE
                                                                                                                                                                                                                                                                                                                                         ELIZUR A.,
                                                                                                               1
24
34
37
54
58
58
78
78
117
                                                                                                                                                                                                                                                                                                                                                                                                                          (TREMBLREL. 01, CREATED)
(TREMBLREL. 01, LAST SEQUENCE UPDATE)
(TREMBLREL. 05, LAST ANNOTATION UPDATE)
N HORMONES ALPHA CHAIN PRECURSOR (GONADOTROPIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                           Conservative
                                                                                                                 ₹,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                             GLAND;
                                                                                   21.7%;
65.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22.4%;
71.3%;
                                                                                                                                  117
57
86
107
109
112
78
                                                                                                                                                                                                                                                                                                                                 15:23-35(1995).
                                                                                                                13066 MW;
                                                                                                                                                                                                                                                                                                                                            ZOHAR
                                                                                                                                                                                                                SIGNAL.
                                                                                                                                                                                                                                                                       D EMBL/GENBANK/DDBJ DATA BANKS.
IN GAMETOGENESIS AND STEROIDOGENSIS
                                                                                                                                BY SIMILARITY.
GLYCOPROTEIN HORMONES A
BY SIMILARITY.
                                                                        Score 433; DB 12; | Pred. No. 1.34e-79; 14; Mismatches 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 446; DB 12;
Pred. No. 6.95e-83;
6; Mismatches 15
                                                                                                                         POTENT
                                                                                                                                                                                                                                                                                                                                                                                        PERCIFORMES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                  VERTEBRATA;
                                                                                                                CAFB9D0C CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       117
                                                                                                                                                                                                                                                                                                                                                                                                 PISCES;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WAKABAYASHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15;
                                                                                            Length 117;
                                                                                                                                                                                                                                                     CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                  GNATHOSTOMATA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                          Indels
                                                                                                                                                                                            ALPHA CHAIN
                                                                                                                                                                                                                                                    (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            × .
                                                                                                                                                                                                                                                                                                                                                                                                                              ALPHA
                                                                                                                                                                                                                                                    SIMILARITY).
                                                                          4.
                                                                                                                                                                                                                                                                       (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KATO Y.;
                                                                          Gaps
                                     228
                                                       91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    87
                                                                          4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ν
```

```
RESULT
ID O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
ID Q
                                             밁
                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AC DE RANGE OF THE RANGE OF THE
                                                                                    δÃ
                                                                                                                                  ď
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOR REAR ROCCE DIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-JUL-1997 (TREMBLREL. 0
01-JUL-1997 (TREMBLREL. 0
01-JAN-1998 (TREMBLREL. 0
11-JAN-1998 (TREMBLREL DE CAMPHOCYTE ASSOCIATED RECHOMO SAPIENS (HUMAN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q62589;
01-NOV-1996 (TREMBLREL. 01, CREATED)
01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
ALPHA SUBUNIT OF GLYCOPROTEIN HORMONES (FRAGMENT) (D. PHODOPUS SUNGTONS (STRIPED HARTE-FOOTED HAMSTEN) (D. PHODOPUS SUNGTONS (STRIPED HARTE-FOOTED HAMSTEN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LT 8
Q62589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE;
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LT 9
000276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; X9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBMITTED (MAY-1997) TO EMBL/GENBANK/DDBJ EMBL; U94503; G2071953; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. SCREATON G., XU X.N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            000276;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BOCKMANN J., BOCKERS T.M., VENNEMANN WITTKOWSKI W., SABEL B., KREUTZ M.R.; ENDOCRINOLOGY 137:1804-1813(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EUKARYOTA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE; 96198779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EUTHERIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EUTHERIA;
172
                                             188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 202
                                                                                                                                     129
                                                                                                                                                                                   62
                                                                                                                                                                                                                                 69
                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                               w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PERCA 192
PE-CT 175
                                                                                                                    QCVSSSPFYCQPCLDCGALHRHTRLLC-SRRDTDCGTCLPGFYEHGDGCVSCPTSTLGSC:::||||:::||||:::|||
                                                                                                                                                                                                                                                                            TSLLLAFGLLCLPWLQEGSADSVCP-QGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDT
                                                                                           ENLFQC-FNCSLCLN-GTVH---
                                                                                                                                                                                   DCRECESGSFTASENHLR-HCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYW-S
                                                                                                                                                                                                                              TCLVCPQDTFLAWENHHNSECARCQACDEQASQVALENCSAVADTRCGCKPGWFVECQVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                X90776; E195654;
                                                                                                                                                                                                                                                                                                                                                                        Similarity 60; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PS00652;
253 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              METAZOA;
                                                                                                                                                                                                                                                                                                                                                                      13.7%;
larity 32.4%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AΑ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               TNFR_NGFR_1;
; 26934 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6047 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OLSEN A., COWPER A., TAN R., MCMICHAEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           04, CREATED)
04, LAST SEQUENCE UPDATE)
05, LAST ANNOTATION UPDATE)
ECEPTOR OF DEATH 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 333; DB 10;
Pred. No. 1.06e-54;
6; Mismatches 7
                                                                                                                                                                                                                                                                                                                                                                      Score 273; DB 2; L
Pred. No. 3.29e-40;
34; Mismatches 74;
                                                                                           -LSCQEKONTVC-TCHAGFFLRENECVSCAGAAPG-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E5AAE0F8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.
A21C863E CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIKLOWITZ P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DATA BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TETRAPODA;
                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (DJUNGARIAN HAMSTER).
                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MULLER
                                                                                                                                                                                                                                                                                                                                                                        17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                     187
                                                                                                                                                                                   119
                                                                                                                                                                                                                                 128
                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                          89
                                                                                                                                                                                                                                                                                                                                                                           13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

٠;٠

Š

```
ố,
                          밁
                                                  5
                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
ID O
                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δĀ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 13.7%;
Best Local Similarity 32.4%;
Matches 60; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                         000275;
01-JUL-1997 (TREMBLREL. 04, CREATED)
01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
LYMPHOCYTE ASSOCIATED RECEPTOR OF DEATH 1B.
                                                                                                                                                                                                                                                                                                                                                                                               LT 11
000275
                                                                                                                                                           SUBMITTED (MAY-1997) TO EMBL/GENBANK/DDBJ DATA EMBL; U94502; G2071951; -. PROSITE; PS00652; THER_NGER_1; 2. SEQUENCE 418 AA; 45456 MW; 3D04954A CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUL-1997 (TREMBLREL. 04, CREATED)
01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
LYMPHOCYTE ASSOCIATED RECEPTOR OF DEATH 9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         O00280
                                                                                                                                                                                                                              SEQUENCE FROM N.A. SCREATON G., XU X.N.,
                                                                                                                                                                                                                                                                                 HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUBMITTED (MAY-1997) TO EMBL/GENBANK/DDBJ DATA EMBL; U94510; G2071967; -. PROSITE; PS00652; TMFR_NGFR_1; 2. SEQUENCE 380 AA; 41192 MW; 17C92A14 CRC32;
                                                                                                                                                                                                                      BELL J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
SCREATON G., XU X.N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               000280;
                                                                                                                                                                                                                                                                          EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               188 PERCA 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   129
                                                                                  13
     62
                              69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
nes 60; Conser
                                                         w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  w
                                                                              AALLLY--LLG-ARAQGGTRSPRCDCAGDF-HKKIGLFCCRGCPAGHYLKAPCTEPCGNS 68
                                                   TSLLLAFGLLCLPWLQEGSADSVCP-QGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDT 61
DCRECESGSFTASENHLR-HCLSCSKCRKEMGQVEISSCTVDRDTVCGCCRKNQYRHYW-S 119
                         TCLVCPQDTFLAWENHHNSECARCQACDEQASQVALENCSAVADTRCGCKPGWFVECQVS 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DCRECESGSFTASENHLR-HCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYW-S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCLVCPQDTFLAWENHHNSECARCQACDEQASQVALENCSAVADTRCGCKPGWFVECQVS 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TSLLLAFGLLCLPWLQEGSADSVCP-QGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AALLLV--LLG-ARAQGGTRSPRCDCAGDF-HKKIGLFCCRGCPAGHYLKAPCTEPCGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                     PE-CT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ENLEGC-FNCSLCLN-GTVH----LSCQEKQNTVC-TCHAGFFLRENECVSCAGAAPG-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                     175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13.7%; Score 273; DB 2; arity 32.4%; Pred. No. 3.29e-40; Conservative 34; Mismatches 74
                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                              OLSEN A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OLSEN A., COWPER A., TAN R.,
                                                                                                      Score 273; DB 2; Length 418; Pred. No. 3.29e-40; 34; Mismatches 74; Indels
                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                              COWPER
                                                                                                                                                                                                                                                                                                                                                                                              418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       380
                                                                                                                                                                                                                              A .
                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ⋛
                                                                                                                                                                                                                                TAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 74;
                                                                                                                                                                                                                              ₽.
                                                                                                                                                                                                      BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                         Indels 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                MCMICHAEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MCMICHAEL
                                                                                                                                                                                                                                                                                    MAMMALIA;
                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       68
                                                                                                         13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13;
```

```
AC DIT
                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOR RAPPOCOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 12
ID 014866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local :
  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                    SALLES G.;
SUBMITTED (SEP-1997) TO EMBL/GENBANK/DDBJ
SUBMITTED (SEP-1997) TO EMBL/GENBANK/DDBJ
EMBL; AF026070; G2570831; -.
PROSITE; PS00652; TNFR_NGFR_1; 2.
SEQUENCE 426 AA; 45950 MW; 87E00821 CF
                                                                                                                                                                                                       O14865;
01-JAN-1998 (TREMBLREL.
01-JAN-1998 (TREMBLREL.
01-JAN-1998 (TREMBLREL.
                                                                                                                                             HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; CHORDATA;
EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUBMITTED (SEP-1997) TO EMBL/GENBANK/DDBJ DATA EMBL; AF026071; G2570833; -. PROSITE; PS00652; TMPR_NGFR_1; 2. SEQUENCE 277 AA; 29111 MW; 06E165C7 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   014866;
01-JAN-1998 (TREMBLREL: 05,
01-JAN-1998 (TREMBLREL: 05,
01-JAN-1998 (TREMBLREL: 05,
                                                                                                         WARZOCHA K.,
                                                                                                                                                                                              DEATH RECEPTOR 3
                                                                                                                                                                                                                                                                    014865
                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SALLES G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EUTHERIA; PRIMATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOLUBLE DEATH RECEPTOR 3 BETA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WARZOCHA
                                                                                                                                                                                                                                                                                                                              129 QCVSSSPFYCQPCLDCGALHRHTRLLC-SRRDTDCGTCLPGFYEHGDGCVSCPTPPPPS 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     188
                                                                                                                                                                                                                                                                                                                120 ENLFQC-FNCSLCLN-GTVH----LSCQEKQNTVC-TCHAGFFLRENECVSCAGAAPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     129
                                                                                                                                                                                                                                                                                                                                                                                          69
                                                                                                                                                                                                                                                                                                                                                                                                                           62 DCRECESGSFTASENHLR-HCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYW-S 119
                                                                                                                                                                                                                                                                                                                                                                                                              3 TSLLLAFGLLCLPWLQEGSADSVCP-QGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDT 61
                                                                                                                                                                                                                                                                                                                                                                                     TCLVCPQDTFLAWENHHNSECARCQACDEQASQVALENCSAVADTRCGCKPGWFVECQVS 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PE-CT 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PERCA 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ENLFQC-FNCSLCLN-GTVH----LSCQERQNTVC-TCHAGFFLRENECVSCAGAAPG-C 171
h 12.9%; Score 257; DB 2; Le Similarity 31.5%; Pred. No. 2.00e-36; 56; Conservative 34; Mismatches 73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            h 12.9%;
Similarity 31.5%;
56; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    K., RIBEIRO P.,
                                                                                                         RIBEIRO P.,
                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                              BETA.
                                                                                                                                                                                                   05, CREATED)
05, LAST SEQUENCE UPDATE)
05, LAST ANNOTATION UPDATE)
                                                                                                          RENARD N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RENARD N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 257; DB 2;
Pred. No. 2.00e-36;
34; Mismatches 73
                                                                                                                                                        VERTEBRATA;
                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                             2.
87E00821 CRC32;
                                                                                                          CHARLOT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHARLOT
                                                                                                                                                                                                                                                                   426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                277
                                                                                                                                                                                                                                                                   ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ⋧
                                                                                  DATA
                                                                                                                                                          TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TETRAPODA; MAMMALIA;
                                                                                                          ?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     c.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              73;
                       Length 426;
                                                                                  BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 277;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BANKS
                                                                                                          COIFFIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COIFFIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
B
15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             15;
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    187
11;
```

Ş

ω

B

13 AALLLV--LLG-ARAQGGTRSPRCDCAGDF-HKKIGLFCCRGCPAGHYLKAPCTEPCGNS

TSLLLAFGLLCLPWLQEGSADSVCP-QGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDT

61 8

```
SOR RANGE OF THE R
                                                                                                                                                                                                                                     SORRER RECORDED TO THE RECORD TO THE RECORD 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 14
ID Q85407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 10.7%;
Best Local Similarity 38.5%;
Matches 30; Conservative
     Query Match 10.7%;
Best Local Similarity 38.5%;
Matches 30; Conservative
                                                                                                       SEQUENCE FROM N.A.
STRAIN-SOMALIA-1977;

WASSUNG R.F., LOPAREV V.N., KNIGHT J.C., CHIZHIKOV V.E.,
TOTMENIN A.V., SHCHELKUNOV S.N., ESPOSITO J.J.;
SUBMITTED (JUL-1995) TO EMBL/GENBANK/DDBJ DATA BANKS.
EMBL; U18341; G885855; --
EMBL; U18341; G88585; --
EMBL; U18341; U18341;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q85407;
01-NOV-1996 (TREMBLREL. 01, CREATED)
01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
HOMOLOG OF VACCINIA VIRUS CDS B28R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q89118;
01-NOV-1996
01-NOV-1996
01-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q89118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-1996 (TREMBLREL 01, CREATED)
01-NOV-1996 (TREMBLREL 01, LAST SEQUENCE UPDATE)
01-JAN-1998 (TREMBLREL 05, LAST ANNOTATION UPDATE)
SOMALIA-1977 RIGHT NEAR-TERMINAL REGION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN-BANGLADESH-1975;

MEDLINE; 9408747.

MASSUNG R.F., ESPOSITO J.J., LIU L.I., QI J., UTTERBACK T.R.,

KNIGHT J.C., AUBIN L., YURAN T.E., PARSONS J.M., LOPAREV V.N.;

NATURE 366:748-751(1993).

EMBL; L22579; G439102; -.

PROSITE; PS00652; THER_MGFR_1; 2.

SEQUENCE 348 AA; 38075 MW; 2A911AF6 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VARIOLA VIRUS.
VIRIDAE; DS-DNA ENVELOPED VIRUSES; POXVIRIDAE; CHORDOPOXVIRINAE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VARIOLA VIRUS.
VIRIDAE; DS-DNA ENVELOPED VIRUSES; POXVIRIDAE; CHORDOPOXVIRINAE;
ORTHOPOXVIRUSES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORTHOPOXVIRUSES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97 RSCNTTHNRICECSPGYY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             69 TCLVCPQDTFLAWENHHNSECARCQACDEQASQVALENCSAVADTRCGCKPGWFVECQVS 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEI 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DCRECESGSFTASENHLR-HCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYW-S 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SSCTVDRDTVCGCRKNQY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
Score 214; DB 11; I
Pred. No. 1.76e-26;
14; Mismatches 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 214; DB 11; I
Pred. No. 1.76e-26;
14; Mismatches 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₽
                                                                                                             Length 349;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 348;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PARSONS J.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2;
     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
Gaps
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2;
```

3

```
밁
                          δÃ
                                                            밁
                                                40 HNLCCLSCPPGTYASRLCDSKT-NTQCTPCGSGTFTSRNNHLPACLSCNG-RCNSNQVET
                               37 NSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEI
                               96
                                                               97
```

Search completed: Wed Job time: 78 secs. мау 6 08:49:44 1998 Ş

97

SSCTVDRDTVCGCRKNQY

98 RSCNTTHNRICECSPGYY 115

#### THIS PAGE BLANK (USPTO)

\*

********	
·************************************	[] [] [] [] [] [] [] [] [] [] [] [] [] [
********	
*****	
****	
*****	(MT)

Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

\*

MPsrch\_nn n.a. - n.a. database search, using Smith-Waterman algorithm

Run on: Tabular output not generated. Wed May 6 12:57:57 1998; MasPar time 1227.99 Seconds 1496.959 Million cell updates/sec

Title:

Description:
Perfect Score:
N.A. Sequence:
Comp: >US-08-804-166-3 (1-1202) from US08804166.seq 1202

1 CTCGAGATGGCTACAGGTAA.......CCCCGATCCTGCCACAATAA 1202 GAGCTCTACCGATGTCCATT.......GGGGCTAGGAGGGTGTTATT

Scoring table: TABLE default Gap 6

Nmatch STD : Dbase 0; Query 0

Post-processing: Minimum Match 0% Listing first 45 summaries Searched: 436399 segs, 764661465 bases x 2

Database:

emb153
1:em\_in 2:em\_or 3:em\_om 4:em\_ov 5:em\_pl 6:em\_htg
7:em\_hum1 8:em\_hum2 9:em\_ba 10:em\_ro 11:em\_un 12:em\_vi
13:em\_pat
genbank105
genbank105
14:gb\_ro 15:gb\_om 16:gb\_ov 17:gb\_in 18:gb\_pl 19:gb\_ba
20:gb\_st 21:gb\_v1 22:gb\_ph 23:gb\_sy 24:gb\_un 25:gb\_pat
26:gb\_htg 27:gb\_pr1 28:gb\_pr2

Database:

Statistics: Mean 11.143; Variance 5.206; scale 2.140

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

Result	Score	Query Match	Length DB	BB	ID	Description	Pred. No.
1	424	35.3	483	25	A29099	Synthetic DNA for TNF-	0.00e+00
N	424	35.3	510	25	A21525	oligonucleotide probe.	0.00e+00
w	424	35.3	600	25	A20257	Synthetic nucleotide s	0.00e+00
4	424	35.3	1331	25	A29103	H.sapiens mRNA for TNF	0.00e+00
v	424	35.3	1368	25	A29098	Synthetic DNA for TNF-	0.00e+00
σ	424	35.3	2050	27	HUMTNFRP	Human tumor necrosis f	0.00e+00
7	424	35.3	2062	25	I43805	Sequence 24 from paten	0.00e+00
æ	424	35.3	2062	25	A21522	TNF alpha gene.	0.00e+00
9	424	35.3	2087	27	HUMTNER	Human tumor necrosis f	0.00e+00
10	424	35.3	2111	27	HUMTNFRB	Homo sapiens tumor nec	0.00e+00
11	424	35.3	2111	25	A26412	cDNA for (55kD TNF-BP)	0.00e+00
12	424	35.3	2112	27	HUMTNFRC	Human tumor necrosis f	0.00e+00
13	424	35.3	2161	27	HSTNFR1A	H.sapiens TNF-R mRNA f	0.00e+00
14	424	35.3	2175	25	A43873	Sequence 1 from Patent	0.00e+00

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15
255	255	283	293	·301	301	300	300	302	302	302	302	303	306	306	306	308	330	330	370	370	372	379	381	381	414	417	420	424	424	424
٢.	Ή.	w		5	5	5	5	5	5.	5	25.1	5	5	5	5	5	7.	7.	.0	0	.0	<u>,                                    </u>	۳		٠.	٠.	٠.	5	5	ŗ
											581		665																	
25	25	25	15	25	27	25	25	25	27	27	15	25	27	27	27	27	27	27	25	25	25	25	25	25	27	25	25	25	25	25
811	ω	08477	994	63120	HUMGHN	A20259	4380	I41411	HSGROW2	HUMGH	FCU72344	I02855	HSCG01	HUMCGBEL03	нимссвваз	HSGG02	HUMGHCSA	BABBCGA	I43787	ū	σ	I43786	-	I43813	CGB	255	808	28	907	
nenc	thetic nucleotid	e 18 from Pa	scrofa p55	mence 3 fr	rowth ho	c nucleot	49 from	from paten	germ li	Human growth hormone (	tus tumour ne	nce 1 from	chorionic	chorionic	chorionic	chorion		eta-chorionic	Sequence 3 from patent	nucleotide	c nucleo	from paten	c nucleotide	ce 56 from	rionic gon	ptor gene f	47 from	2 from paten	otide	Sequence 1 from patent
.84e-1	.84e-1	.86e-2	.08e-2	.41e-2	.41e-2	.11e-2	.11e-2	.79e-2	.79e-2	.79e-2	Ģ	.27e-2	.63e-2	.63e-2	.63e-2	.42e-2	.27e-2	.27e-2	.14e-2	.14e-29	. 79∈	.00€	0.00e+00	. 00e	. 00e			0.00e+00		

#### ALIGNMENTS

Db 121 T	Db 61 A 1 Qy 405 A	Db 1 G	Query Match Best Local Matches 4	BASE COUNT ORIGIN	source	source	FEATURES	JOURNAL	TITLE	AUTHORS	REFERENCE	ORGANISM	KEYWORDS SOURCE	NID	DEFINITION	RESULT 1
GCAGGGAGTGTGAG	AGTGCCACAAAGG <i>I</i>             AGTGCCACAAAGG <i>I</i>	ATAGTGTGTGTCCC             ATAGTGTGTGTCCC	Similarity 25; Conse	/db_ 130 a	<u></u>			Patent: EP 0393438-A 49 24-OCT-1990; BOEHRINGER INGELHEIM INTERNATIONAL G.M.B.H	TNF-receptor,	Hauptmann, R.,	unclassified. 1 (bases 1 to 483)	unidentified	unidentified.	g1248893	Synthetic DNA A29099	A29099
AGCG	ACCT.	CAAG	35.3%; 99.8%; rvative	xref-	rganis	483	tion	GELH	FNE	Him	0 4 8				for	483
GCTCC	ACTTG ACTTG	GAAAA           GAAAA	٠. ٠.	c "tax	m="un		/Qual	8-A 4	-bind	mler,	ω				TNF-	φģ
TCACCG	TACAATG!          TACAATG!	TATATCC!	Score 424; DB 2 Pred. No. 0.00e+ 0; Mismatches	'db_xref="taxon:29278" 124 c 123 g	organism="unidentified" /ob_xref="taxon:32644"  483		Location/Qualifiers	NTERNATI	ling prot	A., Maui					binding	DNA
TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC	AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC	GATAGTGTGTGTCCCCAAGGAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC	Score 424; DB 25; Length 483; Pred. No. 0.00e+00; 0; Mismatches 1; Indels 0;	Totyanism actificat sequence (db_xref="taxon:29278"   106 t	3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	•		[-1990; [ONAL G.M.B.H	TNF-receptor, INF-binding protein and DNA coding therefor	Hauptmann, R., Himmler, A., Maurer-Fogy, I. and Stratowa, C.					TNF-binding polypeptide from patent EP0393438	PAT 03-J1
CCTC 180	GGAC 120       GGAC 464	TACC 60 	Gaps 0;						for	ი					EP0393438.	03-JUL-1995

```
REFERENCE
AUTHORS
JOURNAL
FEATURES
   밁
                    Ş
                                                       Š
                                                                               밁
                                                                                                Š
                                                                                                                    밁
                                                                                                                                    δÃ
                                                                                                                                                          밁
                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
LOCUS
                                         밁
                                                                                                                                                                                               밁
                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                           source
   394
                      645
                                                           585
                                         334
                                                                                274
                                                                                                  525
                                                                                                                                       465
                                                                                                                                                                                                                   345
                                                                                                                    214
                                                                                                                                                           154
                                                                                                                                                                             405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                      y Match 35.3%;
Local Similarity 99.8%;
hes 425; Conservative
                                                                                                                                                                                              94
                                                                                                                                                                                                                           34 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                       CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT 333
                                                                                                                                   TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                             TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ICCIGI
AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                    AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                   TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                       AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTGT 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          unidentified unidentified unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                          oligonucleotide probe A21525
                                                                                                                                                                                                                                                                                                                                            Patent: GB 2246569-A 4 05-FEB-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                g583574
                                                                                                                                                                                                                                                                                                                                                                                                                                                      A21525
                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 510)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             770
                                                                                                                                                                                                                                                                                                     /organism-"Artificial
                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
1. .510
                                                                                                                                                                                                                                                                                                                                                                                                                                                      510
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ďď
                                                                                                                                                                                                                                                      Score 424; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                       sequences"
                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT
                                                                                                                                                                                                                                                                        Length 510;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-JUL-1994
                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
 453
                   704
                                     393
                                                                                               584
                                                                                                                 273
                                                                                                                                    524
                                                                                                                                                       213
                                                                                                                                                                                                                                   93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      524
                                                                                                                                                                                                                                                      0
```

```
RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                Š
                                                                                                                            δÃ
                                                                                                                                                      밁
                                                                                                                                                                           Ş
                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                           밁
DEFINITION
ACCESSION
                                                                                                        밁
                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 35.3%;
Best Local Similarity 99.8%;
Matches 425; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                           645 TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                     121 GATAGTGTGTGTCCCCAAGGAAAATATATCCCACCCTCAAAATAATTCGATTTGGTGTGTACC 180
                                                                                                       541 TCCTGT 546
                                                                                                                                                       481
                                                                                                                                                                                                     421
                                                                                                                                                                                                                        465 TECAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                 241 TGCAGGGAGTGTGAGAGGCGCCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                181 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                 345 GATAGTGTGTGCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                              361 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                765 TCCTGT 770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    454 TCCTGT 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                 TCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              w
                                                                                                                                                                                                                                                                                                                                                                    AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic
A20257
H.sapiens mRNA for TNF-binding A29103
                                   A29103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MODIFIED HUMAN TNFALPHA (TUMOR NECROSIS FACTOR ALPHA) RECEPTOR Patent: WO 9207076-A 25 30-APR-1992;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   unidentified unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g1247896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A20257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           148 a
                                                                                  770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="artificial sequence"
/db_xref="taxon:29278"
157 c 162 g 133 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="unidentified"
/db_xref="taxon:32644"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nucleotide sequence of plasmid p-TNFRecd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . 600
                                  1331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600
                                 ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 424; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 1
                                  DNA
         polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1; Indels 0;
                                  PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 600;
         from
         patent EP0393438
                                 03-JUL-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                 420
                                                                                                                              764
                                                                                                                                                     540
                                                                                                                                                                            704
                                                                                                                                                                                                 480
                                                                                                                                                                                                                          644
                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                     524
                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                  464
                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                  404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
NID
KEYWORDS
SOURCE
ORGANISM
                                              REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                          ACCESSION
                                                                                                                                                                                               RESULT
LOCUS
                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
ORIGIN
                                                                                                                                                NID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                        FEATURES
                                                                                                                        SOURCE
                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                345
                                                                                                                                                                                                                                                                                                                                                645
                                                                                                                                                                                                                                                                                                                                                                        633
                                                                                                                                                                                                                                                                                                                                                                                                585
                                                                                                                                                                                                                                                                                                                                                                                                                       573
                                                                                                                                                                                                                                                                                                                                                                                                                                                525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        393
                                                                                                                                                                                                                                                765
                                                                                                                                                                                                                                                                      753
                                                                                                                                                                                                                                                                                               705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match 35.3%;
Local Similarity 99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 392
                                                                                                                                                                                                                                                                                                                                            CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC 572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 404
                                                                                                                                                                                                                                                                                              CGGGACACCGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                            ú
                                                                                                                                                                                                                                                TCCTGT
                                                                                                                                                                                                                                                                                                           TCCTGT 758
                                                                                                                                                            Synthetic
A29098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                425;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Eukaryotae; Eutheria; Primates; Catarrhini; Hominidae; Hom 1 (bases 1 to 1331)

Hauptmann, R., Himmler, A., Maurer-Fogy, I. and Stratowa, C. TNF-receptor, TNF-binding protein and DNA coding therefor patent: EP 0393438-A 53 24-OCT-1990; BOEHRINGER INCELHEIM INTERNATIONAL G.M.B.H
                                 1 (bases 1 to 1368)
Hauptmann, R., Himmler, A., Maurer-Fogy, I. and Stra
TNF-receptor, TNF-binding protein and DNA coding
Patent: EP 0393438-A 48 24-OCT-1990;
BOEHRINGER INGELHEIM INTERNATIONAL G.M.B.H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g1247517
                                                                                                           unidentified unidentified
                                                                                               unclassified
                                                                                                                                               g1248892
                                                                                                                                                                                                 A29098
                                                                                                                                                                                                                                                 770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/db_xref="taxon:9606"
407 c 343 g 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
/organism="unidentified"
                        Location/Qualifiers
                                                                                                                                                                       DNA for TNF-receptor
                                                                                                                                                                                               1368
                                                                                                                                                                                              đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 424; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                               DNA
                                                                                                                                                                      from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                       patent EP0393438.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1331;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                      Stratowa,
                                                            therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                       632
                                                                                                                                                                                                                                                                                                                                                                                               644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
JOURNAL
MEDLINE
COMMENT
                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                     RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    跊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                            FEATURES
                                                                                                                                                                                                                                                                                  NID
                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
             sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   405
                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                       765
                                                                                                                                                                                                                                                                                                                                                                                                                                        705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATAGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                      TCCTGT 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                 σ
                                                                                                                                                                                                                                                                                                                                                                                       TCCTGT 770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                       Draft entry and computer-readable sequence for [Proc. Sci. U.S.A. (1990) In press] kindly submitted by P.W.Gray, 13-AUG-1990.
                                                                                                                                       Gray, P.W., Barrett, K.J., Chantry, D., Turner, M. and Feldman, Cloning of human tumor necrosis factor (TNF) receptor cDNA expression of recombinant soluble TWP-binding protein Proc. Natl. Acad. Sci. U.S.A. 87, 7380-7384 (1990)
                                                                                                                                                                                        Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordat
Vertebrata; Eutheria; Primates; Catarrhini; Hominidae;
1 (bases 1 to 2050)
                                                                                                                                                                                                                                                         g339759
TNF receptor; transmembrane receptor;
                                                                                                                                                                                                                                                                                             Human tumor n
M60275 M37764
                                                                                                                              91017509
                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                          Human placenta, cDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   35.3%;
larity 99.8%;
Conservative
           /organism="Homo sapiens"
/db_xref="taxon:9606"
/tissue_type="placenta"
155. .274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="artificial sequence"
/db_xref="taxon:29278"
424 c 375 g 276 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:32644"
1. .1368
                                                                        ocation/Qualifiers
                                                                                                                                                                                                                                                                                                           necrosis
                                                                                                                                                                                                                                                                                                                                     2050
                                                                                                                                                                                                                                                                                                                                   ģ
receptor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 424; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                           factor receptor(TNF)
                                                                                                                                                                                                                                                                      tumor necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1368;
                                                                                                                                                                                                                                                                                                           mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                     Chordata;
                                                                                                                                                                                                                                                                                                           complete
                                                                                                                                                                                                                                                                                                                                     11-OCT-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                         Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                             cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            644
                                                                                                                   Acad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

/gene="TNF 155. .1516

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                  SOURCE
ORGANISM
                                                                                                                                                                                                                        RESULT
LOCUS
                              FEATURES
                                                                                                                                               KEYWORDS
                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           765
                                                                                                                                                                                                                                                                                                               695
                                                                                                                                                                                                                                                                                                                                          705
                                                                                                                                                                                                                                                                                                                                                                                                   645
                                                                                                                                                                                                                                                                                                                                                                                                                                 575
                                                                                                                                                                                                                                                                                                                                                                                                                                                              585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                               TCCTGT
                                                                                                                                                                                                                                                                                                                                                                                              CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                            TCCTGT 700
                                                                                                                                                                                                                                                                                                                                                      CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                       ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                         Sequence
I43805
                                         1 (bases 1 to 2062)
Feldmann, M., Gray, P.W., Turner, M.J.C. and Brennan, F.
TNF. alpha. receptor derived binding protein
Patent: US 5633145-A 24 27 MAY-1997;
                                                                                                                                                            g2468903
                                                                                                    Unclassified
                                                                                                                     Unknown
                                                                                                                                   Unknown
                                                                                                                                                                                                                        I43805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        35.3%;
larity 99.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ø
                                                                                                                                                                                           24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /product="INF receptor"
/db_xref="piD:9339760"
/db_xref="piD:9339760"
/translation="MGLSTVPDLLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
/translation="MGLSTVPDLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
PQGKY1HPQNNSICCTRCHKGTYLYNDCPGPGQDTDCRECESGSTTASENHLRHCLSC
SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFWCSLCLNGTVHLSCQE
KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTTVLLPLVI
FFGLCLLSLLFIGLMYRYQRWNSKLYSIVCGKSTPERGGELECTTKPLAPNYSFSPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="TNF receptor"
275. .1513
/product="TNF receptor"
611 c 566 g 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PGFTPTLGFSPVPSSTFTSSSTYTPGDCPNFAAPRREVAPPYQGADPILATALASDPI
PNPLQKWEDSAHKPQSLDTDDPATLYAVVENVPPLRWKEFVRRLGLSDHEIDRLELQN
GRCLREAQYSMLATWRRRTRREATLELLGRVLRDMDLLGCLEDIEEALCAPPLPPAPS
            Location/Qualifiers
1. .2062
/organism-"unknown'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 codon_start=1
                                                                                                                                                                                        from patent
                                                                                                                                                                                                                     ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 424; DB 27;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                         US 5633145.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              444 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 2050;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                     10-JUL-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                         764
                                                                                                                                                                                                                                                                                                                                                                   694
                                                                                                                                                                                                                                                                                                                                                                                                704
                                                                                                                                                                                                                                                                                                                                                                                                                            634
                                                                                                                                                                                                                                                                                                                                                                                                                                                         644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

밁

Ş 밁 S 밁 Ş 밁 Ş 밁 Š 밁 ş 밁 Š 망 Š

ü

```
REFERENCE
AUTHORS
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             695 TCCTGT 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             575 TTCCAGTGCTTCAATTGCAGCCTCTGCCTGCCTGATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        335 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            275 GATAGTGTGTGTCCCCAAGGAAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                345 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TNF alpha
A21522
g579599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; H
1 (bases 1 to 2062)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 Similarity
425; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A21522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                              GB 2246569-A 1 05-FEB-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         α
/db_xref="pid:q579600"
/db_xref="pid:q579600"
/db_xref="swiss-prof::p19438"
/tamslation="mglstvpdlllplvllellvgiypsgviglvphigdrekrdsvc/translation="mglstvpditlplvllellvgiypsgviglvphigdrekrdsvc/trkinslation="mglstvplipvigpeqodtdcrecsgssftasenhlrhclscskckremgqveissctvdrdtvgcrknqyrhymsenlfqcfrcsicturgtvhlscqekqufvctchagfflrenecvscsnckkslectricleqienvefgetgttrklplviffcullslefiglatryqpmksktsivggsprekelbgtttrkpaprsfsprefgftptigfsvypsstftsstytglgconfaaprrevappygadpilatalasdpipnflgfsvypsstftsstytglgconfaaprrevappygadpilatalasdpipnflgmkebypsstytglgtsvypsstftsstytglgconfaaprrevappygadpilatalasdpipnflgmkebypsstytglgconfaaprrevappygadpilatalasdpipnflgmkebypsstytglgconfaaprrevappygadpilatalasdpipnflgmkebypsstytglgconfaaprrevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalasdpipnflgmkebypsstytglgconfaaprevappygadpilatalas
                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/db_xref="taxon:9606"
155. .1522
                                                                                                                                                                                                                                                                                    /gene="TNF alpha gene"
155. .1522
                                                                                                                                                                                                                                                       'gene="INF alpha gene"
                                                                                                                                                                                                                                                                                                                                                                                                                                       location/Qualifiers
                                                                                                                                                                                                                             codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       35.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 424; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 2062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
JOURNAL
MEDLINE
COMMENT
                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δĀ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGACACCGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGCAGGGAGTGTGAGAGCGGCTCCACCGCCTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCTGT 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35.3%;
1 Similarity 99.8%;
425; Conservati
                                                                                                                                                                                                                                                                                                                       Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo 1 (bases 1 to 2087)
Schall, T.J., Lewis, M., Koller, K.J., Lee, A.L., Rice, G.C., Wordstanga, T., Granger, G.A., Lentz, R., Raab, H., Kohr, W.J. and Codde, T., Granger, G.A., Lentz, R., Raab, H., Kohr, W.J. and Codde, T., Granger, G.A., Lentz, R., Raab, H., Kohr, W.J. and Codde, T., Kohr, W.J. and C., Kohr, W.J. and C.
                                                                                                                                                                                              Draft
by T.s
                                                                                                                                                                                                                                                      Cell
                                                                                                                                                                                                                                                                                                                                                                                                                                    cell surface receptor; t
                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human tumor
                                                                                                                                                                                                                                                                       necrosis factor
                                                                                                                                                                                                                                                                                      Molecular cloning and expression
                                                                                                                                                                                                                                                                                                             Goeddel, D.V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           770
                                                                                                                                                                                                entry and computer-readable sequence schall, 26-MAR-1990.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                     361-370 (1990)
/codon_start=1
/db_xref="pli:g339745"
/db_xref="pli:g339745"
/translation="MGLSTVPDLLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
PQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSC
SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                       /organism="Homo sapiens"
/db_xref="taxon:9606"
182. .1549
                                                                                                                                                              Location/Qualifiers
1. .2087
                                                                                          /note="tumor necrosis factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             factor receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         573
                                                                                                                                                                                                                                                                                                                                                                                                                                      tumor necrosis factor mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 424; DB 25;
No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         443
                                                                                                                                                                                                                                                                                        of a receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA,
                                                                                      receptor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 2062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complete
                                                                                                                                                                                                                 for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                       receptor
                                                                                                                                                                                                                                                                                                                          Rice,G.C., Wong,G.H., Kohr,W.J. and
                                                                                                                                                                                                                                                                                        for human tumor
                                                                                                                                                                                                                 [1] kindly submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-NOV-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                         JOURNAL
MEDLINE
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE
                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNT
   CDS
                                                      sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTGT 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                  M58286 M33480
                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                         HUMTNERB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                 /organism="Homo sapiens"
/db_xref="taxon:9606"
/cell_line="HL60"
187. .273
 /gene="TNF receptor"
/product="tumor necrosis
187. .1554
                                                                                                                                         Location/Qualifiers
```

```
CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 361
                                                                                                                                                                                                                                                                                                                                                                                                                AMACAGAACACCGTGTGCACCTGCCATGCAGGTTTCTTTCTAAGAGAAAAACGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
               Tabuchi, H. and Lesslauer, W. Molecular cloning and expre
                                                  Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; H (bases 1 to 211)
Loetscher, H., Pan, Y.-C.E., Lahm, H.-W., Gentz, R., Brockha
                                                                                                                                           tumor necrosis factor receptor. Human cell line HL60, cDNA to m
factor receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KONTYCTCHAGFFLRENECYSCSNCKKSLECTKLCLPQIENVKGTEDSGTTVLLPLVI
FFGLCLLSLLFIGLMYRYQRWKSKLYSIYCGKSTPEKBGELEGITTKPLAPNBSFSPT
GFFTTLGFSPVPSSTFTSSSTYTPGDCPNFAAPRREVAPPYQGADFILATALASDF
PNPLQKWEDSAHKPQSLDTDDPATLYAVVENVPPLRWKEFVRRLGLSDHEIDRLELQN
GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PSLLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             35.38;
99.88;
                                                                                                                                                                                                                          tumor
                                                                                                                                                                                                                                                             2111 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          624 c
                                                                                                                                                                                                                          necrosis factor receptor mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. 0.00e+00;
                                                                                                                                               cDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          581
                 expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          449
                   of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rt
                 the
                   human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 2087;
                   55
                                                      Brockhaus, M.,
                   kd tumor necrosis
                                                                                                                                                                                                                          complete
                                                                                                                                                                                                                                                               14-NOV-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                            cds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      404
                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   524
                                                                                                                                                                                                                                                                                                                                                                                                                764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

factor

receptor"

```
RESULT
LOCUS
                                     REFERENCE
                                                                                                    KEYWORDS
                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
ORIGIN
                                                                                                                                          ACCESSION
                   AUTHORS
                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          345
                                                                                                                                                                                                                                                                                                                                                                                     667
                                                                                                                                                                                                                                                                                                                                                                                                                       645
                                                                                                                                                                                                                                                                                                                                                                                                                                                         607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      307 GATAGTGTGTGCCCCAAGGAAAAATATATGCCACCCTCAAAATAATTCGATTTGGTGTGTACC 366
                                                                                                                                                                                                                                                                                                                                                  705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   427
                                                                                                                                                                                                                                                                                765 TCCTGT
                                                                                                                                                                                                                                                                                                                727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity hes 425; Conser
                                                                                                                                                                                                                             11
                                                                                                                                                                                                                                                                                                                                                                                                                  TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGGAGGATACGGAC
                                                                                                                                                                                                                                                                                                    TCCTGT 732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGACACCGTGTGGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                               AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCAGGGAGTGTGAGAGCGGCTCCTTCACCCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATAGTGTGTGCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 404
                                                                                                                                                                                                                                                                                                                                                                               AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
1 (bases 1 to 2111)
Brockhaus, M., Dembic, Z.,
Schlaeger, E.J.
                                                                                                                                         patent EP0417563.
A26412
                                                                      unidentified
                                                                                                                        g904968
                                                                                                                                                                         cDNA for (55kD TNF-BP)
                                                    unclassified.
                                                                                      unidentified
                                                                                                                                                                                                               A26412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 445
                                                                                                                                                                                                                                                                                  770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         35.3%;
larity 99.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                187. .1554
/gene="TNF
274. .1551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /product="tumor necrosis factor receptor"
/db_xref="pid:9339754"
/db_xref="pid:9339754"
/taxnslation="mdlsTvPDLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
/taxnslation="mdlsTvPDLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
PQKKYLHPQNNSICCTKCHKGTYLYNDCPGPGODTDCRECESGSFTASENHLRHCLSC
SKCRKEMGOVEISSCTVDRDTVCGCRKNQYRHYMSENLFQCFNCSLCLNGTVHLSCQE
KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVGGTEDBGTTVLLPLVI
FFGLCLLSLIEIGLAMRYQRAKSKLTSIVCGKSTPEKEELEGTTTKPLAPNPSFSPT
PGFTPTLGFSPVPSSTTTSSSTYTPGDCPNFAAPRREVAPPYGGADPILATALASDPI
PRILGWEDSAHKPQSLDTDDPATLYAVVENVPPLRMKEFVRRLGLSDHEIDRLELGN
PRILGWEDSAHKPQSLDTDDPATLYAVVENVPPLRMKEFVRRLGLSDHEIDRLELGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /product="tumor necrosis factor 629 c 587 g 450 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPP?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene="TNF receptor"
/note="55 kDa"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PSLLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene="INF receptor"
                                                                                                                                                                                                           2111 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               receptor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 424; DB 27;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                           tumor
                                                                                                                                                                                                             DNA
                  Gentz, R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                           necrosis
                  Lesslauer, W.,
                                                                                                                                                                         factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 2111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            receptor'
                                                                                                                                                                     binding protein
                Loetscher, H.
                                                                                                                                                                                                           26-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                 764
                                                                                                                                                                                                                                                                                                                                                                                                                                                    666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    426
                                                                                                                                                                                                                                                                                                                                                                                                                   704
                and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

Š 밁

Š 밁 Š

밁

SOURCE

Ş 밁 5 밁 Ş 밁 ş 밁

밁

```
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
      REFERENCE
                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                              SOURCE
                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local :
                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 405 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     345 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     307 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                               765
                                                                                                                                                                                                                                                                                                                                                                       12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCIGT 732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGACACCGTGTGGCTGCCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGCAGGGAGTGTGAGAGCGGCTCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCAGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; H l (bases 1 to 2112)
                                                                                                                                                                                   M63121 M75861
g339755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             l Similarity
425; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TNF-binding proteins
Patent: EP 0417563-A 24 20-MAR-1991;
F. HOFFMANN-LA ROCHE AG
                                                                                                                                                                                                                                                                        Human tumor necrosis
                                                                                           Homo sapiens
                                                                                                                    Human cDNA to mRNA.
                                                                                                                                                       tumor necrosis factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       35.3%;
llarity 99.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABLATER "PII: 904969"

ALATER "PII: 904969"

ALATER "PII: 904969"

ALATER "PII: 904969"

ALATER "BII: 904969

ALATER "BII: 90496

ALATER "BII:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Artificial sequences"
187. .1554
/note="pid:e161624"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
1. .2111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /product="55 kD INF-BP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /codon_start=1
                                                                                                                                                                                                                                                                                                                                          2112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              629 c
                                                                                                                                                                                                                                                                                                                                       ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 424; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                                                                                                        factor receptor (TNF receptor) mRNA, complete
                                                                                                                                                    receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              587 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 2111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
á
                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                 Ş
                                                                                                                            δ
                                                                                                                                                                   В
                                                                                                                                                                                               ð
                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
Ş
                               멍
                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 35.3%;
Best Local Similarity 99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            327 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 386
 765
                                 747
                                                                                                    687
                                                                                                                                   645
                                                                                                                                                                     627
                                                                                                                                                                                                     585
                                                                                                                                                                                                                                  567
                                                                                                                                                                                                                                                                      525
                                                                                                                                                                                                                                                                                                       507
                                                                                                                                                                                                                                                                                                                                       465
                                                                                                                                                                                                                                                                                                                                                                      447
                                                                                                                                                                                                                                                                                                                                                                                                           405
                                                                                                                                                                                                                                                                                                                                                                                                                                           387
                                                                                                                              CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                       TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 506
                                                                                                                                                                                                                                                                                                                                                                                                                         AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 446
                                 TCCTGT 752
                                                                                  AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                        AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 404
                                                                  AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                     TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Adolf,G.R.

Molecular cloning and expression of human and rat tumor factor receptor chain (p60) and its soluble derivative, necrosts factor-binding protein
DNA Cell Biol. 9, 705-715 (1990)
91090841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Himmler, A., Maurer-Fogy, I., Kroenke, M., Scheurich, P., Pfizenmaier, K., Lantz, M., Olsson, I., Hauptmann, R., Stratowa, C. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /product-"tumor necrosis factor receptor"
/db_xref-"pin:9339756"
/db_xref-"pin:9339756"
/translation-"MGLSTVPDLLIPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
PQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRRCLSC
SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
KQNTVCTCHAGFFLREBCVSCSNCKKSLECTKLCLPQIENVGTEDSGTTVLLPLVI
FFGLCLLSLEJGLAWYRYQRWKSKLVSIVCGKSTPEKEGELEGTTTRFLAPNPSFSPT
PGFTPILGFSPVPSSTFTSSSTTTPGDCPNFAAPRRVTAPPYGGADFILATALASDPI
PRILGWEDSAHKPQSLDTDDPATLYAVVENVPPLKWKEFVRRLGLSDHEIDBLELQN
PNPLOKWEDSAHKPQSLDTDDPATLYAVVENVPPLKWKEFVRRLGLSDHEIDBLELQN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/db_xref="taxon:9606"
207. .293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="TNF receptor"
/product="tumor necrosis factor
632 c 589 g 456 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene="INF receptor" 294. .1571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="TNF receptor" 207. .1574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene="TNF receptor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 424; DB 27;
Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 2112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                 626
                                                                                                                                                                                                                                                                                                    566
                                                                                                                                                                                                                                                                                                                                                                                                        464
                                                                                                    746
                                                                                                                                  704
                                                                                                                                                                 989
                                                                                                                                                                                                   644
                                                                                                                                                                                                                                                                    584
                                                                                                                                                                                                                                                                                                                                     524
                                                                  764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
LOCUS
Ş
                                     밁
                                                                    Q
                                                                                                         밁
                                                                                                                                         Š
                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL MEDLINE
                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 425; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                      polyA_site
                                                                                                                                                                                                                                                                                                                                                                                          polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                     496
 465
                                                                        405
                                                                                                         436
                                                                                                                                       13
                  TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 555
                                                                                        AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 495
TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                      AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nophar, Y., Kemper, O., Brakebusch, C., Englemann, H., Zwang, R., Aderka, D., Holtmann, H. and Wallach, D. Soluble forms of tumor necrosis factor receptors (TNF-Rs). The for the type I TNF-R, cloned using amino acid sequence data of soluble form, encodes both the cell surface and a soluble form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g37223
TNF-R gene; tumor necrosis factor receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             H.sapiens
X55313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the receptor EMBO J. 9 (10), 3269-3278 (1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; H
1 (bases 1 to 2161)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HSTNFR1A
                                                                                                                                                                                                                                                                                                    459
                                                                                                                                                                                                           35.3%;
larity 99.8%;
Conservative
                                                                                                                                                                                                                                                                                                    ρ
                                                                                                                                                                                                                                                                                                                                    /gene="TNF-R"
/note="putative"
2161
                                                                                                                                                                                                                                                                                                                                                                                                                             /gene="TNF
757. .857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /Codon_start=1
/rodouct="tumor necrosis factor receptor type 1"
/product="tumor necrosis factor receptor type 1"
/db_xref="piD:g37224"
/db_xref="sWISS-PROT:P19438"
/translation="MGLSTVPDLLEPVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
PQ6KYIHPQNUSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLHKCLSC
SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLKGTVHLSCQE
KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVEGTEDSGTTVLLPLVI
FFGLCLLSLFFIGLMYRYQRWKSKYSIVCGKSTPEKEGELEGTTTKPLAPNPSFSPT
PGFTPFIGFSPVPSSTFTSSSTYTFGDCPNFAAPRRVAPPYQGADPILATALASDPI
PRILGKWEDSAHKPQSLDTDDPATLYAVVENVPLKWKEFVRRLGLSDHEIDRLELQN
PNPLOKWEDSAHKPQSLDTDDPATLYAVVENVPLKWKEFVRRLGLSDHEIDRLELQN
                                                                                                                                                                                                                                                                                                                                                                                           /gene="TNF-R"
2145. .2150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /gene="TN 505. .633
                                                                                                                                                                                                                                                                                                  /gene="TNF-R"
642 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          385.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDI EEALCGPAALPPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ′gene≖
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="TNF-R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="TNF-R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TNF-R mRNA for tumor necrosis factor receptor type 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2161
                                                                                                                                                                                                                                                                                                                                                                                                                                               "TNF-R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "TNF-R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "TNF-R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               đđ
                                                                                                                                                                                                          Score 424; DB 27; I
Pred. No. 0.00e+00;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                    604 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RNA
                                                                                                                                                                                                                                                                                                    456 t
                                                                                                                                                                                                                                             Length 2161;
                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-JAN-1993
                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo
                                                                                                                                                                                                             Gaps
                                                                      464
524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA
its
of
                                                                                                                                                                                                               0
```

```
REFERENCE
AUTHORS
TITLE
                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                S
                                                                             용
                                                                                                                                                                           BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                              Matches
                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 525
                   436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             705
                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14
                                                                GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTAGTTTGCGTTTACC 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTCCACAGTGGAC
                                              GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTGT 770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTGT 801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 2175)
Wallach,D., Brackebusch,C., Varfolomeev,E. and Batkin,M.
Proteases capable of shedding the soluble TNF-receptor and TNF-R
derived peptides and antibodies against the proteases inhibiting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1
A43873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g2299022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YEDA RES & DEV (IL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent: EP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the shedding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            unclassified
                                                                                                                                                                                        474
                                                                                                           35.3%;
llarity 99.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     publication ZA 9407962 951121 publication pr 7194376 950801 publication AU 7574294 950504 publication CA 2133872 950413
                                                                                                                                                                                          9
                                                                                                                                                                                       PSLLR"
641 c
                                                                                                                                                                                                                                                                             /db_xref="pid:e305402"
/db_xref="pid:92299023"
/db_xref="pid:92299023"
/db_xref="pid:92299023"
/translation="MGLSTVPDLLPLYLLELLVGIYPSGVIGLVPHLGDREKRDSVC
/translation="MGLSTVPDTLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSC
PQKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSC
SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTTVLLPLYI
                                                                                                                                                                                                                                FFGLCLLSLLFIGLMYRYQRWKSKLYSIVCGKSTPEKEGELEGTTTKPLAPNPSFSPT
PGFTPTLGFSPVPSSTFTSSSTYTPGDCPNFAAPRREVAPPYQGADPILATALASDPI
PNPLQKWEDSAHKPQSLDTDDPATLYAVVENVPPLRWKEFVRRLGLSDHEIDRLELQN
                                                                                                                                                                                                                     GRCLREAQYSMLATWRRRTPRREATLELLGRYLRDMDLLGCLEDIEEALCGPAALPPA
                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="unidentified"
/db_xref="taxon:32644"
                                                                                                                                                                                                                                                                                                                                                                                         /note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                              codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      from Patent EP0657536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0657536-A 1 14-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ģ
                                                                                                          Score 424; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                     604 g
                                                                                                                                                                                       456
                                                                                                           ۳.
                                                                                                                                        Length 2175;
                                                                                                           Indels
                                                                                                          0
                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          615
                                                                                                          0
```

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
                   Ş
                                                멍
                                                                     Q
                                                                                                                       Ş
                                                                                                                                                    밁
                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
 ß
                                                                                                  밁
                                                                                                                                                                                                    밁
                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                           496
                                                                                                                                                                              405
                                                                                                                                                                                        436 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            676 TICCAGIGCITCAATIGCAGCCTCTGCCTCAATIGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    465
676 TICCAGIGCTICAATIGCAGCCICIGCCICAATGGGACCGIGCACCICICCIGCCAGGAG
                                                                                                                         465 TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     796 TCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              y Match 35.3%;
Local Similarity 99.8%;
hes 425; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            496 TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  405 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15
                                                                                                                                           TGCAGGGAGTGTGAGAGAGCGGCTCCTTCACCGCTTCAGAAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                        CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                        AGCTGCTCCAAATGCCGAAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                      AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ICCIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                           AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
164751
                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 2175)
Wallach,D., Brakebusch,C., Varfolomeev,E.
Molecules influencing the shedding of the
preparation and their use
Patent: US 5665859-A 1 09-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g2481645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               164751
                                                                                                                                                                                                                                                                                                                                             474 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>مـــم</u>
                                                                                                                                                                                                                                                                                                                                           organism="unknown"
641 c 604 g
                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
1. .2175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    patent US 5665859.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            đđ
                                                                                                                                                                                                                                                                                          Score 424; DB 25;
Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                             456
                                                                                                                                                                                                                                                                                                                                             4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT
                                                                                                                                                                                                                                                                                                       Length 2175;
                                                                                                                                                                                                                                                                                                                                                                                                                      and
                                                                                                                                                                                                                                                                              Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                      Batkin, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-SEP-1997
                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                    495
                       644
                                                675
                                                                         584
                                                                                                  615
                                                                                                                           524
                                                                                                                                                    555
                                                                                                                                                                             464
                                                                                                                                                                                                                             404
                                                                                                                                                                                                                                                      435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    464
```

#### THIS PAGE BLANK (USPTO)

*****	
*****	
**************************************	[] [] [] [] [] [] [] [] [] [] [] [] [] [
*****	
*****	
*****	
*****	
****	(TM)

Release 3.0.5AA John F. Collins, Biocomputing Research Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd Unit.

MPsrch\_nn n.a. n.a. database search, using Smith-Waterman algorithm

Wed May 6 13:37:52 1998; MasPar time 155.56 Seconds 891.677 Million cell updates/sec

Tabular output not generated.

Title:

N.A. Description: Perfect Score: Sequence: >US-08-804-166-3 (1-1202) from US08804166.seq 1202

Comp: 1 CTCGAGATGGCTACAGGTAA.......CCCCGATCCTCCCACAATAA 1202 GAGCTCTACCGATGTCCATT.........GGGGCTAGGAGGGTGTTATT

Scoring table: TABLE default Gap 6

Gap

Nmatch STD Dbase 0; Query 0

Searched: 159651 segs, 57698962 bases × N

Post-processing: Minimum Listing Match first 0% 45 summaries

n-geneseq30
1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26 27:part27 28:part28
29:part29 30:part30 31:part31 32:part32 33:part33

Statistics: Mean 9.195; Variance 5.326; scale 1.727

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result	Score	Query Match	Length	DB	Ħ	Description	Pred. No.
1	424	35.3	809	-	024441	Encodes truncated TNF	1.67e-282
N	424	35.3	1334	ب	Q06282	Plasmid Tumour Necros	1.67e-282
ω	424	35.3	1368	œ	Q49932	Lambda-derived TNF-R	1.67e-282
4	424	35.3	2062	4	Q24440	Encodes TNF-alpha 55k	1.67e-282
υı	424	35.3	2062	ω	Q20973		1.67e-282
σ	424	35.3	2088	N	Q10883		1.67e-282
7	424	35.3	2111	N	Q10955	Encodes human 55kD TN	1.67e-282
8	424	35.3	2141	ш	Q06285	Human Tumour Necrosis	1.67e-282
9	424	35.3	2175	15	Q90513	p55 TNF-R gene.	1.67e-282
10	424	35.3	6889	18	T15931	DHFR/intron (WTrasSD)	1.67e-282
11	422	35.1	2170	ø	Q50870	p55 Tumour necrosis f	4.91e-281
12	422	35.1	2176	N	Q12215	Type I TNF receptor.	4.91e-281
13	414	34.4	579	ω	Q14800	Human chorionic gonad	3.68e-275
14	409	34.0	836	17	T03212	Single chain gonadotr	1.73e-271
15	409	34.0	836	17	T03243	Single chain gonadotr	1.73e-271

밁

129 gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc 188

Indels

0

Gaps

Conservative

16 405 33.7 575 17 T03240 Human CG beta-subunit 1.49e- 17 381 31.7 504 4 Q24445 Encodes truncated TNF 5.96e- 18 315 26.2 743 17 T03219 Single chain gonadotr 1.09e- 25 1 2771 31 T76770 Rat Fabpl gut-specifi 3.27e- 27 301 25.0 2160 33 T62826 Human growth hormone 1.75e- 28 294 24.5 336 6 Q41459 Human growth hormone 1.75e- 29 294 24.5 336 743 17 T03231 Single chain gonadotr 2.69e- 29 27 27 23.0 743 17 T03231 Single chain gonadotr 2.69e- 20 27 27 27 22.8 744 17 T03223 Single chain gonadotr 2.69e- 27 27 27 22 27 77 27 29 Single chain gonadotr 2.69e- 28 21 2 47 7 4 Q24444 Encodes truncated TNF 3.19e- 29 255 21.2 477 4 Q24444 Encodes truncated TNF 4.65e- 30 226 18.8 2173 1 Q0524 Rat Tumour Necrosis F 4.31e- 31 209 17.4 525 1 Q03844 Bovine beta LH subun 7.56e- 33 206 17.1 2660 4 N30032 Sequence of gene for 1.08e- 34 184 15.3 496 2 N60523 Sequence of gene for 1.08e- 35 179 14.9 462 4 Q24443 Encodes truncated TNF 3.19e- 36 169 14.1 462 4 Q24443 Encodes truncated TNF 3.19e- 37 130 10.8 127 2 Q10678 Partial sequence of c 1.15e- 38 101 8.4 114 2 N60522 Sequence encoding and 1.59e- 39 99 8.2 138 13 Q80819 Human Natriuretic Pep 2.75e- 42 72 6.0 114 6 Q34669 DNA encoding hum 2.63e- 5.75e- 5		a
33.7 575 17 T03240 Human CG beta-subunit 1. 31.7 504 4 Q24445 Encodes truncated TNF 5. 26.2 743 17 T03219 Single chain gonadotr 1. 25.1 2771 31 T76770 Rat Fabpl gut-specifi 3. 25.0 474 4 Q24442 Encodes truncated TNF 2. 25.0 2160 33 T62826 Human growth hormone 2. 24.5 426 2 N60524 Sequence encoding hum 2. 23.0 743 17 T03231 Single chain gonadotr 2. 23.0 743 17 T03232 Single chain gonadotr 2. 23.0 743 17 T03221 Single chain gonadotr 2. 24.1 7703221 Single chain gonadotr 2. 25.1 752 17 T03222 Single chain gonadotr 2. 26.1 7752 17 T03221 Single chain gonadotr 2. 27.4 17 T03221 Single chain gonadotr 2. 28.7 74 17 T03221 Single chain gonadotr 2. 29.8 772 17 T03221 Single chain gonadotr 2. 20.8 247 4 Q24444 Encodes truncated TNF 4. 21.2 477 4 Q24444 Encodes truncated TNF 4. 21.3 496 1 Q03841 Porcine beta LH subuni 1. 25.1 40 1 Q03841 Porcine beta LH subuni 1. 26.0 4 N30032 Sequence encoding dog 2. 28.0 2010878 Equince encoding dog 3. 28.1 10 20 2010878 Partial sequence of c 1. 28.4 114 2 N60522 Fuman Natriuretic Pep 5. 28.5 12 N71239 Sequence encoding hum 2. 28.6 114 6 Q34669 DNA encoding hum 2. 28.6 2 N60878 Human pro-growth horm 2. 28.7 2 N60801 Human pro-growth horm 2.	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	11111222222222222222222222222222222222
7 575 17 T03240 Human CG beta-subunit 1. 7 504 4 Q24445 Encodes truncated TNF 5. 743 17 T03219 Single chain gonadotr 1. 771 31 T76770 Rat Fabpl gut-specifi 3. 762826 Human growth hormone 2. 260 33 T62826 Human growth hormone 2. 260 31 T03231 Single chain gonadotr 2. 271 T03221 Single chain gonadotr 2. 272 17 T03221 Single chain gonadotr 2. 273 17 T03221 Single chain gonadotr 2. 274 17 T03221 Single chain gonadotr 2. 274 17 T03221 Single chain gonadotr 2. 275 17 T03221 Single chain gonadotr 2. 277 17 T03221 Single chain gon	77 72 71 71	381 381 381 381 381 381 381 381 381 381
17 T03240 Human CG beta-subunit 1 Q24445 Encodes truncated TNF 5. Single chain gonadotr 1 T76770 Rat Fabpl gut-specifi 3 T76770 Encodes truncated TNF 6 Q24442 Encodes truncated TNF 9 G41459 Human growth hormone 6 Q41459 Human growth hormone 7 T03231 Single chain gonadotr 1 T03231 Single chain gonadotr 1 T03221 Single chain gonadotr 1 T03221 Single chain gonadotr 1 T03221 Single chain gonadotr 2 T033221 Single chain gonado		
T03240  Encodes truncated TNF 5.  T03219  Single chain gonadotr 1.  T76770  Rat Fabpl gut-specifi 3.  Q24447  Encodes truncated TNF 6.  G14526  Human growth hormone 2.  M60524  Single chain gonadotr 2.  T03233  Single chain gonadotr 2.  T03229  Single chain gonadotr 2.  T03221  Single chain gonadotr 2.  T03227  Single chain gonadotr 2.  Single chain gonadotr 2.  M60528  Rat Tumour Necrosis F 4.  M60529  M60520  Sequence encoding dog 6.  M60521  Sequence encoding dog 6.  M60523  Sequence encoding dog 6.  M60523  Sequence encoding dog 6.  M60524  Bartial sequence of c 1.  M60525  Sequence encoding ami 1.  M60526  M60527  Human Natriuretic Pep 2.  M60527  Human Natriuretic Pep 2.  M60678  Sequence encoding hum 2.  M60678  Sequence encoding hum 3.  M60678  Sequence encoding hum 2.  M60678  Sequence encoding hum 3.  M60678  Sequence encoding hum 2.  M60801  Human Natriuretic Pep 5.  M60678  Sequence encoding hum 3.  M60678  Sequence encoding hum 3.		
Human CG beta-subunit 1. Encodes truncated TNF Single chain gonadotr 1. Rat Fabpl gut-specifi 3. Encodes truncated TNF Human growth hormone 1. Encodes truncated TNF Human growth hormone 2. Single chain gonadotr 3. Single chain gonadotr 2. Single chain gonadotr 2. Single chain gonadotr 3. Sequence of gene for 1. Sequence encoding dog 5. Equincated TNF 3. Fartial sequence encoding min 1. H-beta - 5. to 41 frag 3. Human Natriuretic Pep DNA encoding hCG beta 5. Sequence encoding hum 2. Sequence encoding hum 3. Sequence encoding pre 2. Human pro-growth horm 2.		
beta-subunit 1.1 gut-specifi 3.2 yurncated TNF 1.1 gut-specifi 3.3 yurncated TNF 1.2 yuth hormone 2.2 yuth yuth hormone 2.2 yuth yuth yuth yuth yuth yuth yuth yuth	Q10572 Q34669 N71239 N60678 N60801	0703244440 0703244440 0703244440 0703244440 0703244440 0703244440 0703244440 0703244440 07034440 07034440 07034440 07034440 07034440 07034440 07034440 07034440 07034440 07034440 07034440 07034440 07034440 07034440 07034440 07034440 07034440 07034440 070340 070340 070
	an Natriuretic Pep 2 encoding hCG beta 5 uence encoding hum 2 uence encoding pre 2 an pro-growth horm 2	beta-subunit 1.1 yut-specifi 2 yut-specifi 3.1 yuncated TNF 9.3 with hormone 2.2 with hormone 2.2 years and gonadotr 2.3 years and gonadotr 2.3 years and gonadotr 2.4 years and gonadotr 2.5 years and gene for 2.5 years and 3.5 years

### ALIGNMENTS

RESULT Query Match Best Local S Matches 42 Q24441 standard; DNA; 608 BP.
Q24441;
Q24441;
Q5-NOV-1992 (first entry)
Q5-NOV-1992 (first entry)
Encodes truncated TNF-alpha 55kD receptor (197 amino acids).
tumour necrosis factor alpha; extracellular binding domain;
treatment; pulmonary diseases; septic shock; HIV infection; AIDS;
malaria; viral meningits; graft versus host disease;
autoimmune disease; rheumatoid arthritis. treating autoimmune disease, septic shock, HIV etc.

Example; Fig 7; 43pp; English.

This sequence encodes the designed TNF-alpha 55kD receptor derivative, as present in pTNFRecd. This was produced as described 024441. This derivative lacks the 81 carboxyl terminal residues of the cytoplasmic domain. The derivative could be used in the regulation of TNF-alpha mediated responses by binding and sequestering human TNF-alpha e.g. in the treatment of pulmonary diseases, septic shock, HIV infection, malaria, viral meningitis, graft versus host disease and autoimmune diseases, esp. rheumatoid W09207076-A.
30-APR-1992.
18-OCT-1991; G01826.
18-OCT-1990; GB-022648.
(CHAR-) CHARING CROSS SUNLEY RES CENT.
(CHAR-) Feldmann M, Gray PW, Turner MJC;
WPI; 92-167156/20.
P-PSDB; R24080. See also Q24440-51, R24000, R24080-84, R27585, Q29236-8 Sequence 608 BP; 148 A; 159 C; 165 G; 136 T; arthritis. New polypeptide capable of binding human TNF alpha - comprises first three cysteine-rich subdomains of TNF alpha receptor for treating autoimmune disease, septic shock, HIV etc. Homo sapiens. l Similarity 425; Conser 35.38; 99.88; Score 424; DB 4; L Pred. No. 1.67e-282; 0; Mismatches 1; Length 608 ĺn

```
RESULT
PROCESSION
PROC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ν
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                PT DNA encoding TNF binding protein and TNF- receptor - used in the tumour treatment and to understand mechanismsm to TNF action Disclosure; Fig 1(1-3); 51pp; German.

C pTNF-BPL5 is one of 30 positives clones in a screened cDNA library from induced TNF-induced fibrosarcoma cells. A TNF-BP had been isolated from the urine of patients with uraemia and probes/primers were constructed from the determined amino acid sequence.

To produce a vector expressing a soluble form of TNF-binding protein, this plasmid was cut with XmmI, amplified by PCR and the amplified DNA cut with BamHI and EcoRI.

C The resulting 0.75 k DNA fragment was inserted into pT7/T3 alpha-19 with BamHI and EcoRI, and the recover pTNF-BP. This was cut with BamHI and EcoRI, and the recovered fragment inserted into PAD-CMVI (006283) to give the required plasmid pADTNF-BP.

See also Q06282-Q06285.

299 A; 409 C; 342 G; 284 T;
       Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-APR-1989; DE-913101.
21-JUN-1989; DE-920282.
(BOEH ) BOEHRINGER INGELHEIMINT.
HAUDTMANN R, Himmler A, Maurer-Fogy I, Stratowa WPI; 90-321987/43.
P-DSDB- DOTALO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag= a
/product=TNF-BP
EP-393438-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-JAN-1991 (first entry)
Plasmid Tumour Necrosis Factor-Binding Protein 15 cDNA insert.
Tumour necrosis factor binding protein; TNF-BP; TNF-receptor;
pTNF-BP15; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q06282 standard;
Q06282;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       aaacagaacaccgtgtgcacctgccatgcaggtttcttttctaagagaaaacgagtgtgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ttocagtgottoaattgoagoctotgoctoaatgggaccgtgcacctctcctgocaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCTGT 770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tcctgt 554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C999acacc9t9t9t99ct9ca99aagaacca9tacc99cattatt99agtgaaaacctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              l Similarity
425; Conse
     35.3%;
larity 99.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers 213..1325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ВÞ
  Score 424; DB 1; I
Pred. No. 1.67e-282;
0; Mismatches 1;
                                                    Length 1334;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                G
                                                                                                                                                                                                      pT7/T3 alpha-19
This was cut
     0
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     404
  0
FRESULT TO THE ENGINEER OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lambda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               333
```

```
/*tag= a
/product= hr
sig_peptide
/*tag= b
mat_peptide
/*tag= c
                                                                                                                                                                                                                                                                                 14-OCT-1993.
26-MAR-1993;
30-MAR-1992;
                                 New fusion protein tumour necrosis factor and human interleukin-1 receptor - useful in therapy, diagnosis and assays of e.g. rheumatoid arthritis, diabetes, cerebral malaria, sepsis, etc. Disclosure; Page 57-59; 85pp; English.

The sequences given in 049931-32 encode human tumour necrosis factoreceptor (TNF-R) and the sequences in 049933-34 encode human interleukin-1 receptor (IL-IR). These sequences were used in the production of a fusion protein which conformed to one of the
                                                                                                                                                                                                                                           (IMMV ) IMMUNEX CORP. Smith CA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; tumour necrosis factor receptor; TNF-R; interleukin-l receptor: IL-1R; fusion protein; linker; TNF; IL-1; cachexia; cerebral malas rheumatoid arthritis; diabetes; multiple sclerosis; septic shock; pulmonary fibrosis; silicosis; allograft; reograft; rejection; graft verses host disease; sepsis; inflammation; allergy;
TNF-R-linker-TNF-R-linker-IL-lR
                                                                                                                                                                                                   WPI; 93-336592/42.
P-PSDB; R42059.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q49932 standard;
                                                                                                                                                                                                                                                                                                                                             ₩093Ĭ9777-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    autoimmune dysfunction;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lambda-derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATAGTGTGTCCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tcctgt 758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cgggacaccgtgtgtgtgtctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -gt10-7-ctnfbp.
Location/Qualifiers
1..1366
                                                                                                                                                                                                                                                                                                                                                                                                                                               hTNF-R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    770
                                                                                                                                                                                                                                                                                 U02938.
US-860710.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TNF-R CDNA.
                                                                                                                                                                                                                                                                                                                                                                                     121..1363
                                                                                                                                                                                                                                                                                                                                                                                                                            1..120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1368
                                                                                                 factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                404
```

```
FIRESULT RESULT ACCORDED TO CO. ACCORDED TO CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 42
/*tag a human INF-
mat_peptide 1265
/*tag b
/note "3"
mat_peptide 1265
/*tag c
/*codon seq:"TGG", a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    host diseas
autoimmune
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TNF-R-linker TNF-R

The linker may comprise 5-100 amino acids selected from Gly, Asp,
Ser, Thr and Ala. These linkers separate the individual moeities
by such a distance that each component of the fusion protien is
capable of folding into the secondary or tertiary structure required
for its biological activity. These fusion proteins may be used in
therapy, diagnosis and assays for conditions mediated by TNF or IL-1,
particularly in conditions in which both TNF and IL-1 play a causitive
role. They may be used to treat cachexia, rheumatoid arthritis,
diabetes, multiple sclerosis, pulmonary fibrosis and silicosis,
derebral malaria, allograft and xenograft rejection in graft verses
host disease, sepsis, septic shock, inflammation, allergies and
antoimmune dvefunctions
                                                                                                                                                                                                                                                             Q24440 standard; DNA; 2062 BP.
Q24440;
Q24440;
D5-NOV-1992 (first entry)
Encodes TNF-alpha 55kD receptor.
tumour necrosis factor alpha; extracellular binding domain; treatment; pulmonary diseases; septic shock; HIV infection; malaria; viral meningits; graft versus host disease; autoimmune disease; rheumatoid arthritis.
                                                                                                                                                                                                                                                Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IL-1R-linker-TNF-R-linker-TNF-R or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGACACCGTGTGGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cgggacaccgtgtgtgggtgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                              sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tcctgt 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ch 35.3%;
l Similarity 99.8%;
425; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    dysfunctions.
1368 BP; 292 A;
                                                                                                                                                                                              Location/Qualifiers 156..1517
                                                                                                                          TNF-alpha
1265..1267
                                                    1265..1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 424; DB 8; L
Pred. No. 1.67e-282;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    424 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    376 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1368;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 276 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
Š
                                                               밁
                                                                                            δõ
                                                                                                                              밁
                                                                                                                                                            δÃ
                                                                                                                                                                                            밁
                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PT New polypeptide capable of binding human TNF alpha - comprises first three cysteine-rich subdomains of TNF alpha receptor for treating autoimmune disease, septic shock, HIV etc.

PS Claim 4; Fig 1; 43pp; English.

CC This sequence encodes human TNF-alpha 55kD receptor . A placenta cDNA CL library in gtl0 was screened with probe Q29236. Ten hybriddising clones were plaque purified and cDNA size determined by PAGE against an CC were plaque purified and cDNA size determined by PAGE against an CC Eco RI digested phage DNA. The inserts of two cDNA clones were then sequenced. The coding region of the majority of the human TNF-alpha CC 55kD receptor was isolated as an EcoRI fragment encoding 374 amino calds, and cloned into a mammalian cell expression vector, resulting compineering a termination codon just prior to the transmembrane compineering a termination codon just prior to the transmembrane compineering a termination codon just prior to the transmembrane compineering a termination codon just prior to the transmembrane compineering a termination codon just prior to the transmembrane compineering a termination codon just prior to the transmembrane compineering a termination codon just prior to the transmembrane compineering a termination codon plasmid the designed DNA sequence. The TNF-alpha receptor expression plasmids were then transfected into monkey (COS-7 cells.

See also Q24440-51, R24000, R24080-84, R27585, Q29236-8
Sequence 2062 BP; 429 A; 618 C; 572 G; 443 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-OCT-1991; GO1826.
(CHAR-) CHARING CROSS SUN Brennan FM, Feldmann M, G WPI; 92-167156/20.
P-PSDB; R24000
New polypeptide capable of first three cysteins-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sig_peptide
/*tag= f
W09207076-A.
30-APR-1992.
18-OCT-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mat_peptide
/*tag= d
/codon= seq"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /codon=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag=
 695
                                                               635
                                                                                                645
                                                                                                                              575
                                                                                                                                                               585
                                                                                                                                                                                              515
                                                                                                                                                                                                                                525
                                                                                                                                                                                                                                                                 455
                                                                                                                                                                                                                                                                                                465
                                                                                                                                                                                                                                                                                                                                395
                                                                                                                                                                                                                                                                                                                                                                 405
                                                                                                                                                                                                                                                                                                                                                                                                335
                                                                                                                                                                                                                                                                                                                                                                                                                                345
                                                                                                                                                                                                                                                                                                                                                                                                                                                               275
                                  705
                                                                                              ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                               tgcagggagtgtgagagcggctccttcaccgcttcagaaaacccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                              aagtgccacaaaggaacctacttgtacaatgactgtccaggcccgggggcaggatacggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc
tcctgt 700
                                                 TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                  GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                  CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                l Similarity
425; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           e
• Seq:"GAC", aa:Asn
~+:Me 156..274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Seq"AAG", aa:Leu
tide 1433..1435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              35.3%;
larity 99.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1258..1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUNLEY RES CENT.
M, Gray PW, Turner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 424;
Pred. No. 1.
0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                e 424; DB 4; L
. No. 1.67e-282;
Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MJC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>سر</u>
۰۰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                          694
                                                                                                                                                                                            574
                                                                                                                                                                                                                                                                                                                                                                                                                              404
                                                                                                                                                                                                                                                                                                                              454
                                                                                                                                                                                                                                                                                                                                                                 464
                                                                                                                                                                                                                                                                                                                                                                                                394
                                                                                                                                                                                                                                                                                                                                                                                                                                                               334
                                                                                              704
                                                                                                                              634
                                                                                                                                                             644
                                                                                                                                                                                                                              584
                                                                                                                                                                                                                                                             514
                                                                                                                                                                                                                                                                                                524
                                  764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

Ş

765

TCCTGT

770

```
Ş
                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                          밁
                                                                                                                                                             밁
                                                                                                                                                                                   Š
                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                                                                                                                                                                             useful in treating cachexia, sepsis and auto immune diseases e.g. rheumatoid arthritis
Disclosure; Fig 1; 25pp; English.
The sequence is that of DNA encoding tumour necrosis factor alpha binding protein which was obtd. from a human placental cDNA library in lambda gtll using a probe (Q20974). The DNA also encodes the extracellular domain of human TNF alpha receptor and as such it is useful for treating diseases where TNF alpha is involved as a causative agent, e.g. cachexia, sepsis and autoimmune diseases, specifically rheumatoid arthritis. See also Q20974.
Sequence 2062 BP; 429 A; 616 C; 573 G; 444 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mat_peptide
/*taq= c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-FEB-1992; 013410.
15-UN-1990; 013410.
15-UN-1999; GB-013410.
(CHAR-) CHARING CROSS SUNLE.
Feldman M, Gray P, Turner M, Brennan WPI; 92-045613/06.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q20973 standard;
Q20973;
11-MAY-1992 (fir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New tumour necrosis factor alpha binding protein and polypeptide useful in treating cachexia, sepsis and auto immune diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note= "encodes the TNF alpha receptor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sig_peptide
/*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TNF-alpha binding protein gene.
Tumour necrosis factor alpha, autoimmune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P-PSDB; R20787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           extracellular domain.
     635
                              645
                                                                                 585
                                                                                                           515
                                                                                                                                     525
                                                                                                                                                              455
                                                                                                                                                                                       465
                                                                                                                                                                                                                 395
                                                                                                                                                                                                                                            405
                                                                                                                                                                                                                                                                    335
                                                                                                                                                                                                                                                                                                        275 gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag=
amacagmacaccgtgtgcacctgccatgcaggtttctttctaagagmamacgagtgtgtc
                        ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                             cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                              agctgctccaaatgccgaaaggaaatgggtcaggtggagatctctttttgcacagtggac
                                                                                                                                                                                    TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                        aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                                                                                                                                           GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 404
                                                                                                                                                                                                    tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                                                                         AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                   425;
                                                                                                                                                                                                                                                                                                                                                h 35.3%;
Similarity 99.8%;
425; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      473..532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers 155..1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          155..274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                275..1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     extracellular domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ВP
                                                                                                                                                                                                                                                                                                                                               Score 424; DB 3; L
Pred. No. 1.67e-282;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            020974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      diseases;
                                                                                                                                                                                                                                                                                                                                                                        Length 2062;
                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cachectin;
                                                                                                                                                                                                                                                                                                                                               0
 694
                          704
                                                   634
                                                                              644
                                                                                                      574
                                                                                                                                                                                    524
                                                                                                                                                                                                               454
                                                                                                                                                                                                                                         464
                                                                                                                                                                                                                                                                  394
                                                                                                                                                                                                                                                                                                                                               0
```

```
Q
                                                                                                                                                                               Ş
                                                                                                                                                                                                                                     δÃ
 밁
                      δõ
                                                 망
                                                                          Š
                                                                                                       В
                                                                                                                                                          밁
                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-JUL-1989; US-381080.

11-DEC-1989; US-450329.

07-FEB-1990; US-479661.

(SYNE-) SYNERGEN INC.

WPI; 91-073847/11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag- a
AU9058976-A.
24-JAN-1991.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tumour necrosis factor inhibitor - for suppression of TNF-alpha and -beta, useful as therapeutic agent.

Disclosure; Fig 21; 142pp; English.

The sequence encodes the entire 30 kD TNF inhibitor. The clone from which the sequence was obtd. was isolated from a cDNA library prepd. from RNA form U937 cells treated with PNA/PNA. The whole gene can be inserted into expression vectors for prepn. of TNF inhibitor for use in the treatment of inflammatory and degenerative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13-MAY-1991 (first entry)
30kD TNF inhibitor precursor gene in lambda-gtl0-7ctnfbp
Tumour necrosis factor; inhibitor; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   010883 standard;
010883;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        See also Q10878,
Sequence 2088 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P-PSDB; R10986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                469
                                                                                                                                                                                                                                         465
                                                                                                                                                                                                                                                                                                                     349
                                                                                                                                                                                                                                                                                                                                                 345
                                                                                                                                                                                                                                                                                                                                                            289 gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc
 709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                695 tcctgt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        705 AAACAGAACACCGTGTGCACCTGCCATGCAGGTTTCTTATCTAAGAGAAAACGAGTGTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      765 TCCTGT 770
                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                           aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
tcctgt
                        TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                         ttccagttgcttcaattgcagcctctgcctcaatgggaccgttgcacctctcctgccaggag
                                                                                                                                CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                               cgggacaccgtgtgtgggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                 agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                      tgcagggagtgtgagagcggctccttcaccgcttcagaaaaaccacctcagacactgcctc
                                                                                                                                                                                                                                                                                           AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                              GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                   AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                        TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                35.3%;
1 Similarity 99.8%;
425; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                       BP; 439 A; 626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
171..1536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2088
                                                                                                                                                                                                                                                                                                                                                                                                 Score 424; DB 2; 1
Pred. No. 1.67e-282
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                        578
                                                                                                                                                                                                                                                                                                                                                                                                                         Length 2088;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>ດ</u>
                                                                                                                                                                                                                                                                                                                                                                                                 Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       445
                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         764
                                                   708
                                                                            704
                                                                                                      648
                                                                                                                                644
                                                                                                                                                          588
                                                                                                                                                                                   584
                                                                                                                                                                                                             528
                                                                                                                                                                                                                                        524
                                                                                                                                                                                                                                                                  468
                                                                                                                                                                                                                                                                                           464
                                                                                                                                                                                                                                                                                                                    408
                                                                                                                                                                                                                                                                                                                                              404
                                                                                                                                                                                                                                                                                                                                                                                                   0
```

Š

765

TCCTGT

```
밁
                                                                                                                    Ş
                                                                                                                                                                Š
                                                                                                                                                                                          밁
                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                          S
                                Ş
                                                         밁
                                                                        Ş
                                                                                                                                              밁
                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                  밁
            밁
                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-MAR-1991.

31-AUG-1990; 116707.

12-SEP-1989; CH-003319.

08-MAR-1990; CH-000746.

20-APR-1990; CH-001347.

(HOFF) HOFFMANN-LA ROCH

Brockhaus M, Dembic Z, G

Schlaeger EJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= b
/product= 55kD :
EP-417563-A.
                                                                                                                                                                                                                                                                                                                                                           Partial anino acid Sequences were determined for the 55 and 75kD TNF-BP8 (see R11072-R11081) and oligonucleotide primers were synthesised based on these partial sequences. The primers were used to produce a cDNA fragment for use as approbe to screen a human placental cDNA bank constructed in lambda gtll. Positive clones were identified and sequenced. DNA constructs comprising the TNF-BP coding sequence may also contain a fragment encoding a human Ig domain. Recombinant constructs are used to transform cells to confer improved TNF-binding properties.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P-PSDB; R11082.
Insoluble tumour necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24-WAY-1991 (first entry)
Encodes human 55kD TNF-binding protein.
Tumour Necrosis Factor: binding proteins; septic
autoimmune glomerulonephritis; lymphokine; cytoki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q10955 standard;
Q10955;
                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                    307
             667
                                                         607
                                                                               585
                                                                                                   547
                                                                                                                          525
                                                                                                                                               487
                                                                                                                                                                     465
                                                                                                                                                                                           427
                                                                                                                                                                                                                 405
                                                                                                                                                                                                                                       367
                                                                                                                                                                                                                                                             345
                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    91-081851/12.
ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                            aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                                                                                                                        gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc
                                                                                        tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                                                AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                            GATAGTGTGTCCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                              CGGGACACCGTGTGGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                         AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTGCACAGTGGAC
                                                                                                                                                                     TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4; Fig 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  them, useful
                                                                                                                                                                                                                                                                                                                                                    2111 BP;
                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TNF-BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      274..1551
                                                                                                                                                                                                                                                                                                                   35.38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ROCHE
Z, Gen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gentz
                                                                                                                                                                                                                                                                                                                                                     445 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pharmaceutical p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ą
                                                                                                                                                                                                                                                                                                       Score 424; DB 2; I
pred. No. 1.67e-282;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lesslauer
                                                                                                                                                                                                                                                                                                                                                     628
                                                                                                                                                                                                                                                                                                                                                     ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g proteins prods. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ξ
                                                                                                                                                                                                                                                                                                                                                     588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lotscher
                                                                                                                                                                                                                                                                                                         <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                     <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             shock;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ,
                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 for antibody
                                                                                                                                                                                                                                                                                                                                                    450
                                                                                                                                                                                                                                                                                                                               2111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                    H
                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                      426
                                                                                                                                                                                                                                                            404
                                                                                                                                                                                                                                                                                  366
                                                                                                   606
                                                                                                                         584
                                                                                                                                              546
                                                                                                                                                                    524
                                                                                                                                                                                          486
                                                                                                                                                                                                                464
                                                       666
                                                                              644
            726
                                  704
                                                                                                                                                                                                                                                                                                         0
```

```
Š
                                        ġ
                                                    Ş
                                                                   밁
                                                                                Ş
                                                                                               밁
                                                                                                            Ş
                                                                                                                           В
                                                                                                                                        Š
                                                                                                                                                      밁
                                                                                                                                                                  Q
                                                                                                                                                                                  밁
                                                                                                                                                                                                Š
                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
            맑
                                                                                                                                                                                                                            Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                               LambdarNF-R2 encodes the complete human TMF-R2 and was used to construct a plasmid (pADTNF-R) expressing the product the sam as pADTNF-BP (see Q06283). See also Q06282-Q06285. Sequence 2141 BP;
                                                                                                                                                                                                                                                                                                                                                       /*tag= a
/label=huTNF-R
EP-393438-A.
24-OCT-1990.
06-APR-1990; 10
21-APR-1989; DE
                                                                                                                                                                                                                                                                                                                                                                                                                     Human Tumour Necrosis Factor-Receptor Tumour necrosis factor binding proteir lambdaTNF-R2; raTNF-R8; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q06285 standard;
Q06285;
                                                                                                                                                                                                                                                                                                                            Hauptmann R, Himmler WPI; 90-321987/43.
                                                                                                                                                                                                                                                                                                                                          06-APR-1990; 106624.
21-APR-1989; DE-913101.
21-JUN-1989; DE-920282.
(BOEH ) BOEHRINGER INGELHEIMINT
                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                           29-JAN-1991
765
            753
                          705
                                        693
                                                      645
                                                                   633
                                                                                 585
                                                                                               573
                                                                                                             525
                                                                                                                           513
                                                                                                                                         465
                                                                                                                                                      453
                                                                                                                                                                     405
                                                                                                                                                                                  393
                                                                                                                                                                                                 345
                                                                                                                                                                                                               333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCTGT
                          aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                                                tcctgt 732
                                                             ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tcctgt 758
                                                       TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                           ch 35.3%;
l Similarity 99.8%;
425; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                           (first
                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers 213..1577
                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                                                   ۶
                                                                                                                                                                                                                                                                                                                                                                                                                                                         2141 BP
                                                                                                                                                                                                                                                                                                                                    Maurer-Fogy
                                                                                                                                                                                                                           Score 424; DB 1; L
Pred. No. 1.67e-282;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                             protein;
                                                                                                                                                                                                                                                                                                                                   ŗ,
                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA insert
                                                                                                                                                                                                                                                                                                                                    Stratowa
                                                                                                                                                                                                                                                                                                                                                                                                                              TNF-BP;
                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                    O
                                                                                                                                                                                                                                                                                                                                                                                                                            TNF-receptor;
                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                            used to
                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                             way
                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                  452
                                                                                                                                                                                                 404
                                                                                                                                                                     464
                                                                                                                                                                                                               392
                                                                                                                                         524
                                                                                                                                                      512
                           764
                                        752
                                                      704
                                                                   692
                                                                                 644
                                                                                               632
                                                                                                             584
                                                                                                                           572
```

0

```
Š
                         밁
                                                         Š
                                                                                                밁
                                                                                                                                                                       밁
                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                 CC shedding response is the spacer region (see R75012) in the extracellular CC domain. This region is located close to a site of cleavage of the CC molecule, and links the Cys rich module to the transmembrane domain. The CS spacer region of the encoded protein was used to create the chimeras CC (EGF-R) that are represented by R75007-11. This spacer region was CC (R75026-47). Of the spacer region, the most important residues are CC (R75026-47). Of the spacer region, the most important residues are CC (R75027-11), This spacer region was CC (R75026-47). Of the spacer region, the most important residues are CC (R75026-47). Of these protein addense, with the exception of a limited CC side chain identity of these residues, with the exception of a limited CC dependence on the identity of Val 173. Mutations which alter the CC conformation of the protein adversely effect the shedding process. The mutations shown in R75013-47 were introduced in order to create an CC inhibitor of a protease that is capable of cleaving the soluble TNF-R CC R75017-9, R7503-5 R303-8 and R75042-3. These protease inhibitors can be seen in CC used for enhancing TNF function.
                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                       Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-OCT-1994; 075742.

12-OCT-1993; IL-107268.

(YEDA) YEDA RES & DEV CO L

Batkin M, Brakebusch C, V

WPI; 95-194342/26.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       p55 TNF-R gene.
p55; tumo...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disciosure; Fig 1; 40pp; English.

This sequence represents human p55 tumour necrosis factor (TNF-R) DNA.

Expression of this receptor is regulated by shedding of the extracellular receptor fragment. The p55 TNF-R can be shed in response to different inducing agents, e.g. phorbol myristate acetate (PMA), depending on cell type. The only region of the receptor whose structure affects the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New protease capable of cleaving soluble tumour necrosis (TNF) receptor - from cell-bound TNF- receptor, useful fantagonising deleterious effects of TNF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IT 9
Q90513 standard; DNA; 2175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New protease capable (TNF) receptor - from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     epidermal growth factor rec
phorbol myristate acetate;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "possible poly-A signal"
AU9475742-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-JAN-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P-PSDB; R75084
                                                           465
                                                                                                                                     405
                                                                                                                                                                                                              345
                                                                                                                                                                                                                                                   376
                                                                                                496
                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tumour necrosis factor receptor; TNF-R; human; murine; chimera;
                                                                                                                                                                                                                              gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc 435
agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                             tycagggagtytyagagcggctccttcaccgcttcagaaaaaccacctcagacactgcctc
                                                                                                                                                    aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                         TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                        GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 404
                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TNF-R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
256..1623
                                                                                                                                                                                                                                                                                                       35.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   receptor; Edte; PMA; SS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LTD.
Varfolomeev E,
                                                                                                                                                                                                                                                                                  Score 424; DB 15;
Pred. No. 1.67e-282;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EGF-R; protease; inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wallach
                                                                                                                                                                                                                                                                                                                      Length 2175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ä
                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                 464
                                                                                                                                                                    495
                                                                                                                                                                                                                                                                                    0
```

```
Ş
                                                                           밁
                                                                                                     Ş
                                                                                                                                      밁
                                                                                                                                                                  Ş
                                                                                                                                                                                                밁
                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                 밁
                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                                                                                                                                                                           Improved process for the selection of recombinant host cells expressing high level of a desired product - uses eukaryotic host cells contg. a DNA construct comprising a selectable gene Example 2: Page 36-42: 137pp; English.

A dicistronic vector (T15930) comprises a regulatory region derived from the cytomegalovirus immediate-early gene, a selectable dihydrofolate reductase gene positioned within an intron having a 5' wild-type ras splice donor site, a downstream sequence coding for an immunoadhesin, TnFr-1gG, capable of binding tumour necrosis factor, and a poly-A sequence. Transfection of CHO DHFR- cells and subsequent methotrexate amplification and growth of the cells in nutrient-rich medium gave TnFr-1gG in yields of 9.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T15931;
                                                                                                                                       1845
                                                                                                                                                                                                                                              1725 gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc 1784
                                                                                                                                                                                                                                                                                                                                                                                ug/ml (15-fold higher compared to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-FEB-1996.
28-JUL-1995; U09576.
05-AUG-1994; US-286740.
(GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic. WO9604391-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DHFR/intron (WTrasSD)-TnFr-IgG dicistronic vector.

Recombinant host cell; dihydrofolate reductase; selectable marker;
DHFR; ras splice donor; dicistronic vector; gene expression;
immunoadhesin; TnFr-IgG; tumour necrosis factor; ds.
                  1965
                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 96-129407/13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Crowley CW,
                                                                                                                                                                                                                                                                                                                                                                      pools).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-JUN-1996
                                               525
                                                                                                         465
                                                                                                                                                                     405
                                                                                                                                                                                                                                345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          796 teetgt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                             agctgctccaaatgccgaaaggaaatggggtcaggtggagatctcttcttgcacagtggac
                                                                                                                         tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                    aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac 1844
                                                                                                                                                                                                                                GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                        TGCAGGGAGTGTGAGAGCGGCTCTTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                  AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGACACCGTGTGTGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                            L Similarity
425; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 standard; DNA; 6889
                                                                                                                                                                                                                                                                                                                                                        6889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                         35.3%;
.larity 99.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                       ₽₽;
                                                                                                                                                                                                                                                                                                                                                       1729
                                                                                                                                                                                                                                                                                         Score 424; DB 18;
Pred. No. 1.67e-282;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                       ?
                                                                                                                                                                                                                                                                                                                                                       1826
                                                                                                                                                                                                                                                                                                                                                                                 conventional vector amplified
                                                                                                                                                                                                                                                                                                                                                       ü
                                                                                                                                                                                                                                                                                                                                                       1681
                                                                                                                                                                                                                                                                                                                       Length 6889;
                                                                                                                                                                                                                                                                                                                                                       ့
                                                                                                                                                                                                                                                                                                                                                       1653
                                                                           1964
               2024
                                             584
                                                                                                        524
                                                                                                                                                                  464
                                                                                                                                                                                                                                404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                735
```

S 밁 Ş 용 Ş 밁 Ş

735 704

644

764 795

```
ş
                                        밁
                                                        Q
                                                                          밁
                                                                                               â
                                                                                                                     밁
                                                                                                                                                                              Best Loc
Matches
                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                      /rtag= a
/product= p:
EP-568925-A.
                                                                                                                                                                                                                  Modification of the tumour necrosis factor receptor by mutation or deletion modulates signal transduction and/or cleavage effected by the receptor. This modulation of activity can also be achieved using effector proteins which interact with the TNF receptor. Molecules which interact with the TNF receptor or the effector proteins can be used to treat or prevent diseases associated with TNF activity e.g. autoimmune disease; rheumatoid arthritis; graft rejection; graft vs. host disease or septic shock. They can also be used to treat overdoses of exogenous TNF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PSS T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q50870 standard; DNA; 2170
Q50870;
13-MAY-1994 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2025
                                                                                                                                                                                                                                                                                                         disease, septic shock, etc.
Claim 2; Figure 1; 17pp; English.
Modification of the tumour necros
                                                                                                                                                                                                                                                                                                                                     Modulating activity of tumour necrosis factor receptor - using peptide(s), antibodies, etc. which interact with critical region freeptor or effector protein, for controlling auto-immune
                                                                                                                                                                                                                                                                                                                                                                     WPI; 93-353057/45.
P-PSDB; R42197.
                                                                                                                                                                                                                                                                                                                                                                                        03-MAY-1992; IL-101769
(YEDA ) YEDA RES & DEV
Brakebusch C, Wallach
                                                                                                                                                                                                                                                                                                                                                                                                            29-APR-1993;
03-MAY-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rheumatoid
effector pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        585
                                                                                                                                                           376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           705
     616
                                                                                                                                         345
                       525
                                        556
                                                            465
                                                                               496
                                                                                                   405
                                                                                                                     436
                                                                                                                                                                        35.18;
Local Similarity 99.58;
les 424; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tumour necrosis factor receptor coding sequence.
; tumour necrosis factor; receptor; disease; autoimmunity;
practical arthritis; graft rejection; graft vs. host; septic shock;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCTGT 770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag 2084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                    gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tectgt 2150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac 495
   cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                       GATAGTGTGTCCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 404
                                                                                                 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   p55
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tumour necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers 256..1623
                                                                                                                                                                                                                                                                                                                                                                                        ი ც
                                                                                                                                                                                                                                                                                                                                                                                                  LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BP.
                                                                                                                                                                          Score 422; Db ;
Pred. No. 4.91e-281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   factor receptor
                                                                                                                                                                                                Length
                                                                                                                                                                              Indels
                                                                                                                                                                                                 2170;
                                                                                                                                                                                                                                                                                                                                                  regions
                                                                                                                                                                             0
                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                 y g
                                                                             555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      644
    675
                     584
                                       615
                                                            524
                                                                                                  464
                                                                                                                                                                              0
`.
٠
   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            덩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                              /number= 4
polyA_signal
/*tag= m
EP-433900-A
26-JUN-1991
13-DEC-1990;
13-DEC-1990;
12-JUL-1990;
                                                                                                         /number= 3
repeat_unit
/*tag= 1
                                                                                                                                                         repeat_unit
/*tag= j
/number= 2
                                                                                                                                                                                                                                                                                                                                                                                     mat_peptide
/*tag= c
                                                                                                                                                                                                                                                                                                                                                                                                                      /product= 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Type I TNF receptor.
Tumour Necrosis Factor; TNF; binding protein; TBP-I; ss.
                                                                                                                                                                                                                                        misc_RNA
                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                              misc_RNA
                                                                                                                                                                                                                                                                                                                                                                                                          sig_peptide
/*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Кеу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q12215;
12-SEP-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T 12
Q12215 standard;
            (YEDA ) YEDA
Wallach D, No
                                                                                                                                       repeat_unit
/*tag=_k
                                                                                                                                                                                                repeat_unit
/*tag= i
                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
                                                                                                                                                                                                         /label= transmembrane_domain repeat_unit 385..504
                                                                                                                                                                                                                                                /*tag= g
/note= "TBP-I
                                                                                                                                                                                                                                                                             /*tag= f
/note= "TBP-I
                                                                                                                                                                                                                                                                                                          /*tag= e
/note= "TBP-I
                                                                                                                                                                                                                                                                                                                                     Longer"
                                                                                                                                                                                                                                                                                                                                               /label= soluble_domain
/note= "may be 2 codon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               terminator
                                                                                                                                                                                      /number= 1
                                                                                                                                                                                                                            /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                           note- "in-frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag=
                                                                                                                                                                                                                                                                                                                                                                      /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ttccagtgcttcaattgcagcctctgcctcaatgcgaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCTGT 770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tcctgt 801
   Ö
                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                             type
         ; 124133.
; IL-092697.
); IL-095064.
); IL-095064 CO LTD.
DA RES & DEV CO LTD.
            Nophar Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first
                                                                                                                                                                                                                                      derived sequence"
889..957
                                                                                                                                                                                                                                                                    derived sequence"
850..858
                                                                                                                                                                                                                                                                                                 derived sequence" 583..627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers 244..246
                                                                                                                                                                                                                                                                                                                              376..414
                                                                                                                                                                                                                                                                                                                                                                               319..864
                                                                                                                                                                                                                                                                                                                                                                                                319..1620
                                                                                                                                                                                                                                                                                                                                                                                                                    INF receptor 256..318
                                                                                                                                                 634..756
                                                                                         2145..2150
                                                                                                                                                                              505..633
                                                                                                                                                                                                                                                                                                                                                                                                                                                 termination
256..1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA; 2176
                                                                                                                    757..858
                                                                                                                                                                                                                                                                                                                                                codons shorter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                           codon'
            Engelmann
                                                                                                                                                                                                                                                                                                                                                  유
                                                                                                                                                                                                                                                                                                                                                 þ
                                                                                                                                                                                                                                                                                                                                                 few
             Ξ
             Brakebusch
           G
```

Š B

밁

```
FIRSULT CREATER FOR SERVICE CO. ACC O. ACC O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 42
     *tag= a
mat_peptide
/*tag= b
sig_peptide
/*tag= c
polyA_site
/*tag= d
mutation
/*tag= e
/note="c ->
mutation
                                                                                                                                                                                                                                                                                                                                                                                                                    Q14800 standard: DNA; 579
Q14800;
11-FEB-1992 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Recombinant tumour necrosis factor binding protein I - prepd. by transfecting eukaryotic cells with vector contg. deoxyribonucleic acid encoding human type T TNF receptor or soluble domain Disclosure; Fig 1(D); 30pp; English.

The Tumour Necrosis Factor Binding Protein I is the soluble form of type I TNF-receptor and constitutes a fragment of the cell surface form of this receptor; corresp. to its extracellular domain. There is no characteristic poly(A) addition signal near the 3' end of the cDNA. The sequence ACTANA (tag) may serve as an alternative to this signal, but with low efficiency.
                                                                                                                                                                                                                                                                                                                                            Human chorionic gonadotropin beta subunit analogue Glycoprotein hormone; hCGB'; fertility; immuno-casi immuno-contragestive; vaccine; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 91-186774/26
P-PSDB; R12550.
                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tcctgt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gatagtgtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgcagtacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        agotgotcoaaatgocgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tgcagggagtgtgagagcggctccttcaccgcttcagaaaacccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ch 35.1%;
l Similarity 99.5%;
424; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2176 BP;
                              ø,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               801
                                                                                                                                                                                                                                                                            Location/Qualifiers 26..523
                                                                                                                                                                                                                              86..520
                                                                                                                             524..579
                                                                                                                                                                              26..85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Α,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 422; DB 2; L
Pred. No. 4.91e-281;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           644 C;
                                                                                                                                                                                                                                                                                                                                                                              immuno-castration;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 2176;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
RESULT RESULT AC PINAC P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14-NOV-1991.
07-MAY-1991; U03162.
08-MAY-1990; US-520703.
(UYNE-) UNIV MED NEW JERSEY.
Campbell RK, MOyle WR;
WPI: 91-353528/48.
P-PSDB; R15043.
                       /*tag= a
/transl_except= |
sig_peptide
/*tag= b
                                                                                                                                                                           IT 14
T03212; standard; cDNA; 836 BP.
T03212;
26-APR-1996 (first entry)
26-APR-1996 (first entry)
Single chain gonadotropin analogue 1 coding sequence.
Single chain gonadotropin; human chorionic gonadotropin;
Single chain gonadotropin; human chorionic gonadotropin;
Single chain gonadotropin; buman chorionic gonadotropin;
Alpha; beta; subunit; analogue; glycoprotein hormone; fer
inhibit; stimulate; increase; lutropin; luteinising hormofollicle stimulating hormone; FSH; vaccine; contraceptive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New glyco-protein hormone analogues - for inducing fertility as immuno-castration agents, for suppressing reproductive system development and as immuno-contragestive vaccines.

Example 3: Fig 4a; 94pp; English.

The sequence is an analogue of hCG beta subunit cDNA contg. two silent mutations which eliminate restriction sites. It was prepd. from the plasmid pxWB-hCG-beta, a construct contg. the hCG beta subunit isolated from human placenta (Fiddes and Goodman) in plasmid pxMB, a derivative of pUC18 designed to facilitate cloning of glycoprotein hormones. The sequence was used as the starring construct for many mutants. (See R15061-R15125 and R15161-R15198). Sequence 579 BP; 128 A; 205 C; 151 G; 95 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1143
                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag= f
/note="c
  mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            104 ccacggtgccgcccatcaatgccaccctggctgtggagaaggagggctgcccgtgtgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     atcaccytcaacaccaccatctytyccyyctactyccccaccatyacccycytyctycay
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cccttgacctgtgatgaccccgcttccaggactcctttcctcaaaggcccctccccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     atcoggetecetggetgecegeggegtgaacceegtggtetecetaegeegtggetete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCACGGTGCCGCCCCATCAATGCCACCCTGGCTGTGGAGAAGGAGGGCTGCCCCGTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATCACCGTCAACACCACCATCTGTGCCGGCTACTGCCCCACCATGACCCGCGTGCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATCCGGCTCCCTGGCTGCCCGCGCGTGAACCCCGTGGTCTCCTACGCTGTGGCTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ch 34.4%;
l Similarity 99.3%;
417; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ω
                                              pos:240..
33..92
                                                                                                                     Location/Qualifiers 33..830
                                                                       .242,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 414;
Pred. No. 3.
0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'e 414; DB 3; Le
1. No. 3.68e-275;
Mismatches 3;
```

hormone; fertility; g

523

1082

403 1022 343 962

463

Length 579;

0

0

842

163

902 223

```
RESULT
ID T(
AC T(
DT 08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               &
                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Probb; R6247.

The thods for altering fertility in mammals, esp. humans - e.g. for altering fertility by reducing the activity and/or levels of the stroulating flyco:protein hormones having lutropin activity esp. for circulating glyco:protein hormones having lutropin activity esp. Example 12; Fig 6; 102pp; English.

Charlogue I (human CG-beta(1-145)-linker-human CG-alpha(1-92)) is a composition of a single chain gonadotropin having a chorionic specific example of a single chain gonadotropin having a chorionic connection of a connection of a connection of a connection of connection of a connection of an alogue has lutelnising hormone (lutropin) activity and is consecuted for inducing ovulation and increasing male fertility.

The sequences coding for analogue I were cloned from a humann connection of the 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag= (/tag= 1)/(1abel- Analogue_1 //tabel- A
TO3243 stands
TO3243;
TO3243;
08-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note "single-strand overhang.
strand also has a single-strand
its 5'-end; the sequence of the
5'-TCCGGATTAGCTTGAGATGGATCC-3'"
                                                                                                                                                                                                  1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-AUG-1995.
17-FEB-1995; U02067.
18-FEB-1994; US-199382.
(SENS-) SENSI-TEST.
                                                                                                                                                                                                                                                                                                                          1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                          1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /label= sticky_end
                                                                                                                                                                                                                                                           471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                           agccttccaagcccatcccgactcccggggccctcggacccccgatcctccccaa 527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ccacggtgccgccccatcaatgccaccctggctgtggagaaggagggctgccccgtgtgc 170
                                                                                                                                                                                                                                                                                                                atccggctccctggctgcccgcgcgcgcgtgaaccccgtggtctcctacgccgtggctctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9999tcctgccggccctgcctcaggtggtgtgcaactaccgcgatgtgcgcttcgagtcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            atcaccgtcaacaccaccatctgtgccggctactgccccaccatgacccgcgtgctgcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95-302553/39.
DB; R86247.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGGTCCTCCCCGCCTGCCTCAGGTGGTGTGCAACTACCGCGATGTGCGCTTCGAGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCACGGTGCCGCCCATCAATGCCACCCTGGCTGTGGAGAAGGAGGGCTGCCCCGTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCCGGCTCCCTGGCTGCCCGCGCGCGTGAACCCCGTGGTCTCCTACGCTGTGGCTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATCACCGTCAACACCATCTGTGCCGGCTACTGCCCCACCATGACCCGCGTGCTGCAG
                                                               standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                               CDNA; 836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          34.0%;
                                                                   ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 409; DB 17;
Pred. No. 1.73e-271;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The complementary overhang at overhang is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 836;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                   470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               410
                                                                                                                                                                                                                                                                                                                          1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
Myle wr;

DR WPI; 95-302553/39.

Presob; R86259.

PT Methods for altering fertility in mammals, esp. humans - e.g.

PT Methods for altering fertility by reducing the activity and/or levels of circulating glyco:protein hormones having lutropin activity

PS Example 23; Fig 18; 109p; English.

CC Analogue la (human CG-beta(1-145)-linker-human CG-alpha(1-92)[N530, CC N780]) is a specific example of a single chain gonadotropin having a chorionic gonadotropin (CG) beta-subunit at the N-terminus and a CC CG alpha-subunit at the C-terminus, joined by a linker of 1-16 amino CC acids. The analogue la was derived from analogue l by removing the CC two glycosylation sites from the alpha-subunit. The analogue has cc anti-luteinising hormone (lutropin) activity and can be used for facilitating ovulation, terminating pregnancy and reducing androgen Sequence 836 BP; 166 A; 282 C; 222 G; 166 T;

CC Sequence 836 BP; 166 A; Canre 409; DB 17; Length 836;
                                                                                              γg
                                Ş
                                                               В
                                                                                                                                                                                                                       밁
                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag= a
/transl_except= |
sig_peptide
sig_beptide
*tag= b
mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /label- Analogue_la
/note- "nucleotides 93..527 encode amino ac
/note- "nucleotides 93..527 encode amino ac
1-145 of hG beta-subunit; nucleotides
528..551 encode a (Gly-Ser)4 linker and
nucleotides 552..827 encode amino acids
1-92 of gonadotropin alpha-subunit lacking
the glycosylation sites at amino acid
positions 52 and 78"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Single chain gonadotropin analogue la coding sequence. Single chain gonadotropin; hcg single chain gonadotropin; hcg alpha; beta; subunit; analogue; glycoprotein hormone; fertil inhibit; stimulate; increase; lutropin; luteinising hormone; forlicle stimulating hormone; FSH; vaccine; contraceptive; d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note- "single-strand overhang. The complementary strand also has a single-strand overhang at its 5'-end; the sequence of the overhang is 5'-TCCGGATTAGCTTGAGATGGATCC-3'"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "wild-type Asn 52 codon has I
Gln codon to remove a glycosylation
Misc_difference 783..785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24-AUG-1995.
17-FEB-1995; U02067.
18-FEB-1994; US-199382.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gln codon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9522340-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note= "wild-type Asn 78 codon has been changed Gln codon to remove a glycosylation site" misc_feature 1..26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Misc_difference 705..707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (SENS-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /label= sticky_end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag=
    231
                                                               171
                                                                                              783
                                                                                                                             111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *tag=
                                atcaccgtcaacaccaccatctgtgccggctactgccccaccatgacccgcgtgctgcag
                                                                                           ggggtcctgccggccctgcctcaggtggtgtgcaactaccgcgatgtgcgcttcgagtcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SENSI-TEST
                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    pos:240..
33..92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers 33..830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        93..827
                                                                                                                                                       Score 409; DB 17;
Pred. No. 1.73e-271;
0; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                been changed
site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ៥
                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  fertility;
                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sp
                                                                                                                                                         Gaps
                                  902
                                                               230
                                                                                                                                                         0
```

1083 CCCTTGACCTGTGATGACCCCCGCTTCCAGGACTCCTCTTCCTCAAAGGCCCCTCCCCCC 1142 471 agccttccaagcccatcccgactcccgggggccctcggacaccccgatcctcccccaa 527 [
023 AGCTGTCAATGTGCACTCTGCCGCCGCAGCACCACTGACTG
arcceectocteectecececeteaAcccceteGTeGTCTCTACGCTGTGGCTCTC 1022  agctgtcmatgtgcactctgccgccgcagcaccactgactgcgggggtcccaaggaccac 410  [[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[
atcoggctccctggctgcccgcgcgtgaaccccgtggtctccctacgccgtggctctc 350
903 GGGGTCCTCCCCGCCCTGCCTCAGGTGGTGTGCAACTACCGCGATGTGCGCTTCGAGTCC 962

Search completed: Wed May 6 13:40:33 1998 Job time: 161 secs.

:

 31.0 563 13 N31955 yw89a07.s1 Homo sapien 0.00e+00 30.9 473 25 AA400910 zt71h09.s1 Soares test 0.00e+00 30.9 479 13 N30684 yw77h04.s1 Homo sapien 0.00e+00 30.4 446 13 N31684 yw84a02.s1 Homo sapien 0.00e+00 30.4 446 13 N3684 yw84a02.s1 FCoroco Nation 0.00e+00	373 371 365 365 3	121109	
5 48 13 N30036 yw80b11.s1 Homo sapien 5 56 13 N30831 yw70b04.s1 Homo sapien			
5 442 13 N32233 yw832003.51 Homo sapien			
8 593 13 N29730 yw78h03.sl Homo sapien			
5 601 13 N32759 yw91b05.s1 Homo sapien 9 537 13 N30276 yw69d04.s1 Homo sapien			
 y h Length DB ID Description	:	:	
 SUMMARIES	<b>30</b>		
 is the number of results predicted by chance to have a ster than or equal to the score of the result being printed, rived by analysis of the total score distribution.	red. No. is th core greater t and is derived	Pr So an	
 Mean 11.212; Variance 2.135; scale 5.252	••	Statistics	
 <pre>emb1-est 1:em_est1 2:em_est2 3:em_est3 4:em_est4 5:em_est5 6:em_est6 7:em_est8 8:em_gss 9:em_est13 genbank-est 10:gb_est1 11:gb_est2 12:gb_est3 13:gb_est4 14:gb_est5 15:gb_est6 16:gb_est7 17:gb_est8 18:gb_est9 19:gb_est10 20:gb_est11 21:gb_st2 22:gb_gss 23:gb_est12 24:gb_est13 25:gb_est14 26:gb_est15 27:gb_est16 28:gb_est17 29:gb_est18 30:gb_est15 31:gb_est16 28:gb_est17</pre>		Database:	
Minimum Match 0% Listing first 45 summaries	processing:	Post-pro	
1610801 seqs, 607859669 bases x 2	••	Searched	
Dbase 0; Query 0	STD :	Nmatch	
TABLE default Gap 6		Scoring :	
>US-08-804-166-3 (1-1202) from US08804166.seq 1202 1 CTCGAGATGGCTACAGGTAACCCCGATCCTCCCACAATAA 1202 GAGCTCTACCGATGTCCATTGGGGCTAGGAGGGTGTTATT		Title: Description: Perfect Score: N.A. Sequence: Comp:	
llion	output no	Tabular (	
; MasPar time 1103.82 Se		Run on:	
- n.a. database search, using Smith-Waterman algorithm	n.a.	MPsrch_nn	
Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd	Release Copyrig		
		* * * * * * * * * * * * * * * * * * * *	
"安全有关的现在分词不是有关的,我们就是我们的,我们就是我们的,我们就是我们的,我们就是我们的,我们就是我们的,我们就是我们的,我们就是我们的,我们就是我们的,我们就是我们的,我们就是我们的,我们就	* * * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * * *	

ALIGNMENTS

	ი	ი		ი				ი	ი	ი	Q	ი	a	O	ი	ი		ი	O	ი	a	Ω	ი	ი	ი	O	ი	ი	ი	ი	ი
45	44	43	42	41	40	39	38	37	36	3 5	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14
214	217	222	228	233	237	238	241	249	257	267	269	276	278	283	289	288	290	294	298	299	301	309	311	317	319	322	325	331	345	350	354
7.		8	9		9	9	.0	.0		۲.		ω	ω	Ψ	٠.	٠.	٠.	٠.	٠.	٠.	5	5	5	٥.	ა	٥.	7.	7.	8	29.1	9
																														531 16	
																H94451														W71989	
rl Homo sap	s1 Hon	sl Soares p	6 Homo sapien	sl Soares pla	rl Homo sap	acenta	Embryo, 6	5c12.s1 Homo	8g09.s1 Homo	5b10.s1 Homo	5a11.s1 Homo	0ell.sl Homo sap	5b04.sl Homo sap	7el2.sl Homo sap		5q08.s1 Soares p	1h09.rl Soares t	7e05.sl	9f05.sl Homo sap	5£02.sl Soa	gll.sl Homo sag	3c05.sl Homo sap	5h07.sl Homo sap	0b08.s1 Homo sap	.sl Homo s	8a03.sl Homo sap	b04.s1 Homo sap	igll.sl Homo sap	w60b03.sl Soares	5b03.s1 Soares	6c04.
																														Φ	•

#### REFERENCE AUTHORS RESULT LOCUS COMMENT KEYWORDS ACCESSION DEFINITION ORGANISM Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichthyes; Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 601) Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M., Holman, M., Kucaba, T., Le, M., Lennon, G., Marra, M., Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F., Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and yw91b05.sl Homo sapiens cDNA clone 259569 3' similar to gb:J00117 CHORIOGONADOTROPIN BETA CHAIN PRECURSOR (HUMAN);. N32759 Contact: Wilson RK WashU-Merck EST Project Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108 Wilson, R. The WashU-Merck EST Unpublished (1995) Homo sapiens 601 đđ Project mRNA EST 10-JAN-1996

363

30.2

526 28

AA644163

af62d08.sl Soares NhHM 0.00e+00

```
mRNA
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                      ç
                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                       င္မ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        င္ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      မှ
   REFERENCE
                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                          RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                         ද
                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      င္
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                  DEFINITION
                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               137
                                                                                                                                                                                                                                                                                                                                                                                                                                          962
                                                                                                                                                                                                                                                                                                                                         842
                                                                                                                                                                                                                                                                                                                                                                                          902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    77
                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGGTCCTTGGGACCCC-GCAGTCAGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGGGGAGGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 136
                                                                                                                                                                                                                                                                                                                                      GCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGCGGCACCGTGG
                                                                                                                                                                                                                                                                                                                                                                                      CTGCAGCACGCGGTCATGGTGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                   TTGCAGCACGCGGGTCATGGTGGGGCAGTAGCGGGCACAGATGGTGGTGTTGACGGTGAT 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGAGCCACAGCGTAGGAGACCACGGGGGTTCACGCCGCGCGGGCAGCCAGGGAGCCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGGTCCTTGGGACCCCCCCCAGTCAGTGGTGCTGCTGCGGCGCAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                    Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichthyes; Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 537)
                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              High quality sequence stops: 387
Source: IMAGE Consorthum, LLNL
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Location/Qualifiers
                                                                                                                                                                                                                                                                  yw69d04.s1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                yw69d04.sl Homo sapiens cDNA clone 257479 3' similar to CHORIOGONADOTROPIN BETA CHAIN PRECURSOR (HUMAN);.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       32.5%;
larity 97.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/clone="259569"
<1. .>601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    154 c
                                                                                                                                                                                                                                                                                        ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 391; DB 13; Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    219
                                                                                                                                                                                                                                                                                        mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11; Indels
                                                                                                                                                                                                                                                                                        EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 601;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   others
                                                                                                                                                                                                                                                                                      05-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ۳
                                                                                                                                                                                                                                                             gb:J00117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                              315
                                                                                                                                                                                                                                                                                                                                      783
                                                                                                                                                                                                                                                                                                                                                                                      843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1083
                                                                                                                                                                                                                                                                                                                                                                                                                                       903
```

```
MRNA
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
COMMENT
                                                                                                             RESULT
LOCUS
                                                                                                                                                                                                                                       ပ္
                                                                                                                                                                                                                                                                                                    င္
                                                                                                                                                                                                                                                                                                                                                                  မှ
                                                                                                                                                                                                                                                                                                                                                                                                                             င္
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          င္ပ
                  KEYWORDS
                                                                                                                                                                            ဌ
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                 片
                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ද
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            묽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ç
                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                  1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1202 TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT 1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            137 GTGGTCCTTGGGACCCC-GCAGTCAGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                                                                                                                                                                                 255 TGGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCCGGCAAGACCCC
                                                                                                                                                                            784 GGACCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          77 GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17 TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT
                                                                                                                              ω
                                                                                                                                                                                                                                     ATGCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGGCGGCACCGT
                                                                                                                                                                                                                                                      ATGCACACGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGCGGCANCGT
                                                                                                                                                                                                                                                                                                    CC-TGCAGCACGCGGGTCATGGTGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTG
                                                                                                                                                                                                                                                                                                                    CCCTGCAGCACGCGGGTCATGGTGGGGCAGTAACCGGCACAGATGGTGGTGTTGACGGTG
                                                                                                                                                                                                                                                                                                                                                                TGGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCGGGGAGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGAGCCACGGCGTTAGGAGACCACGGGGTTCACGCCGCGCGG-CAGCCAGGGAGCCGGA
                                                                                                                                                                                                           GGCNAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                               GAGAGCCACAGCGT-AGGAGACCACGGGGTTCACGCCGCGCGGCAGCCAGGGAGCCGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGGTCCTTGGGACCCCCGCAGTCAGTGGTGCTGCCGGCGGCAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Wilson RK
WashIn_Merck EST Project
Washington University Schoo
4444 Forest Park Parkway, B
Tel: 314 286 1810
Fax: 314 286 1810
                  91148250
EST.
                                             yw78h03.s1 Homo sapiens
CHORIOGONADOTROPIN BETA
N29730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: est@watson.wustl.edu
High quality sequence stops: 313
Source: IMAGE Consortium, LLNL
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M. Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F., Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The WashU-Merck EST Project Unpublished (1995)
 human clone=258389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                            777
                                                                                                                                                                                                        442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
1. .537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/clone="257479"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 145 c
                                                                                                             593
                                                                                                          ğ
 primer-m13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 384; DB 13;
Pred. No. 0.00e+00;
0; Mismatches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      School |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 201
                                                           CDNA clone 258389 3' similar CHAIN PRECURSOR (HUMAN);.
                                                                                                            mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вох
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of Medicine x 8501, St. 1
 -40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 90
forward library-Soares
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                            05-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Marra, M.,
                                                                           ៩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                           gb:J00117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1083
                                                                                                                                                                                                                                                                     434
                                                                                                                                                                                                                                                                                                     845
                                                                                                                                                                                                                                                                                                                                   374
                                                                                                                                                                                                                                                                                                                                                                                                                               964
                                                                                                                                                                                                                                                                                                                                                                                                                                                              254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      76
                                                                                                                                                                                                                                                                                                                                                                                                314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the
```

```
BASE CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 31.8%;
Best Local Similarity 96.7%;
Matches 414; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1202
                                                                                                                                                                                                                                                                                                                                                                         1142
                                                                                                                                                                                                                     1022
                                                                                                                                                                                                                                                                                             1082
                          376
                                                                                                                                                                                                                                                         197
                                                                                                                                                                                                                                                                                                                                   138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18
                                                                                                                                                                                                                                                                                                                                                                                                              78
                                                                              CTGCAGCACGCGGGTCATGGTTGGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTGA
                                                                                                                                                                                                                                                                                                                                                                                              GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT 77
TGCACACGGGCCACCCTCCTCTCCACAGCCCANGGTTGGCATTGATGGGGCGGCACCGT
                                                                                                                                                            GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCGGCAAGACCACC 315
                                                                                                                                                                                                                                     GAGAGCCACGGCGTAGGAGACCACGGGGTTCACGCCGCGNGG-CAGCCAGGGAGCCGGAT 255
                                                                                                                                                                                                                                                                                                                                 GTGGTCCTTGGGACCCC-GCAGTCAGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCT 196
                                                                                                                                                                                                                                                                                                                                                                       GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGATGGGCTTGGAAGGCT 1143
                                                                                                                                      GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCGGGGGGGAGGACCCC
                                                                                                                                                                                                                 GAGAGCCACAGCGTAGGAGACCACGGGGTTCACGCCGCGGGGGGGCAGCCAGGGAGCCGGAT
                                                                                                                                                                                                                                                                                             GTGGTCCTTGGGACCCCCGCAGTCAGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WashU-Merck EST Project
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. I
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 593)
1 (bases 1 to 593)
Hillier,L., Clark,N., Dubuque,T., Elliston,K., H
Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,
Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., T
Trevaskis,E., Waterston,R., Williamson,A., Wohld
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence stops: 368
Source: IMAGE Consortium, LLNL
This clone is available royalty-free through LLNL;
IMAGE Consortium (info@image.llnl.gov) for further:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The WashU-Merck EST Project 
Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polylinker host-DH10B (ampicillin resistant) Rsitel-Not I Rsite2-Eco RI two placentae: one from 8 weeks and another from weeks post conception. 1st strand cDNA was primed with a Not I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Deuterostomia; Chordata; Vertebrata; Gnathostomata; Ost
Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8to9weeks 2NbHP8to9W vector=pT7T3D (Pharmacia) with a modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/clone="258389"
<1. .>593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Archonta; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .>593
151 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 382; DB 13;
Pred. No. 0.00e+00;
0; Mismatches 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             216 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Soares,M., Tan,F.,
son,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tan, F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hawkins, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Osteichthyes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Theria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                              375
                                                                                                                                                                                                                                                                                             1023
                                                                                                                                                                                                                                                                                                                                                                       1083
                      435
                                                            844
                                                                                                                                      903
                                                                                                                                                                                                                 963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.
```

Сb

밁 မှ 밁 £ င္မ

밁

밁

ç 밁

밁

ç

밁

```
mRNA
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ဌ
                                                                          ç
                                                                                                                               밁
                                                                                                                                                                               ç
                             В
                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 410; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                               1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                             137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        843
                                                                                                                                                                                                                                  17
                                                                                                                               77
GTGGTCCTTGGGACCCC-GCAGTCAGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCT 195
                                                                                                                                                                                                          TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGAACTTGGAAGGCT 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGACCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGT-GGCATTGATGGGGGCGGCACCGT
                                                                                                                             GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 136
                                                                                                                                                                               TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCCGGGAGTCGGGATGGGCTTGGAAGGCT 1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCCAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WashU-Merck EST Project
Washington University Schoo
4444 Forest Park Parkway, B
Tel: 314 286 1810
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHORIOGONADOTROPIN BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichthyes; Sarcopterygil; Choanata; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 564)

1 (bases 1 to 564)

1 (blases 1 to 564)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human clone=259973 primer=ml3 -40 forward library=Soares placer Bto9weeks 2NDHP8to9W vector=pT7T3D (Pharmacins) with a modified polylinker host-DH10B (ampicillin resistant) Rsite1-Not I Rsite2-Eco RI two placentae: one from 8 weeks and another from weeks post conception. 1st strand cDNA was primed with a Not I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: est@watson.wustl.edu
High quality sequence stops: 364
Source: IMAGE Consortium, LINL
This clone is available royalty-free through LINL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            double-stranded cDNA was size selected, ligated to Eco RI adapters (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of a modified pT/73 vector (Pharmacia), Library constructed by Bento Soares and M. Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wilson, R.
The WashU-Merck EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N32604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Wilson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and
                                                                                                                                                                                                                                                                                                                                                                                                              103
                                                                                                                                                                                                                                                                               31.7%;
llarity 96.5%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      777
                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>^</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/clone="259973"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . 564
                                                                                                                                                                                                                                                                                                                                                                                                              .>564
148 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              564
                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              đđ
                                                                                                                                                                                                                                                                               Score 381; DB 13;
Pred. No. 0.00e+00;
0; Mismatches 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           School of Medicine
                                                                                                                                                                                                                                                                                                                                                                                                            206 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHAIN PRECURSOR (HUMAN);.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA
                                                                                                                                                                                                                                                                                    Mismatches 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Box 8501,
                                                                                                                                                                                                                                                                                                                                                                                                              99
                                                                                                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         259973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Louis,
                                                                                                                                                                                                                                                                                                                               Length 564;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3' similar to gb:J00117
                                                                                                                                                                                                                                                                                                                                                                                                              œ
                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                              others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-JAN-1996
                                                                                                                                                                                                                                                                                    ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 res placenta
modified
                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 9
```

```
JOURNAL COMMENT
                 BASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    င္မ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ද
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ç
                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
              mRNA
COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1022
                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CT-GCAGCACGCGGTCATGGTGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGAGCCACGGCGTAGGAGACCACGGGGTTCACGCCGCGCGGCAGCCAAGGGAGCCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACCA 779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCNA 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCACACGGGGCAGCCCTCCTTCTCCACAGCCGGGTGGCATTGATGGGGCGCACCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTGCAGCACGCGGGTCATGGTGGGGCAGTAGC-GGCACAGATGGTGGTGTTGACGGTGA 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCGGGGGAGGACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCCGGCAAGACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGAGCCACAGCGTAGGAGACCACGGGGTTCACGCCGCGCGGGCAGCCAGGGAGCCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGGTCCTTGGGACCCCCGCAGTCAGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                           Contact: Wilson RK
WashU-Merck EST Project
WashIngton University School of Medicine
4444 Forest Park Parkway, Box 8501, St. I
                                                                                                                                                                                                                                                                                                                                                              Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 442)

Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M.,

Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M.,

Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F.,

Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata;
Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichthyes;
Sarcopterygil; Choanata; Tetrapoda; Amniota; Mammalia; Theria;
Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                 The WashU-Merck EST Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     double-stranded cDNA was size selected, ligated to Eco RI adapt (Pharmacia), digested with Not I and cloned into the Not I and RI sites of a modified pT7T3 vector (Pharmacia). Library constructed by Bento Soares and M. Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human clone=258663 primer=ml3 -40 forward library=Soares placenta
8to9weeks 2NbHP8to9W vector=pT7T3D (Pharmacia) with a modified
polylinker host=DH10B (ampicillin resistant) Rsite1=Not I
Rsite2=Eco RI two placentae: one from 8 weeks and another from 9
                                                                                                         High quality sequence stops: 364
Source: IMAGE Consortium, LLNL
This clone is available royalty-free through LLNL;
IMAGE Consortium (info@image.linl.gov) for further i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              yw81f08.sl Homo sapiens cDNA clone 258663 3' similar to gb:J00117 CHORIOGONADOTROPIN BETA CHAIN PRECURSOR (HUMAN);.
                                                                                                                                                                                 Email: est@watson.wustl.edu
                                                                                                                                                                                               Tel: 314 286 1800
Fax: 314 286 1810
1. .44
/organism-"Homo s
/clone="258663"
<1. .>442
<1. .>442
.5 a 110 c 174
                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               đđ
            φ
              8
                                                                                                                                                                                                                                  Louis,
            others
                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RI adapters
ot I and Eco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . .
                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
LOCUS
                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         දි
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       င္မ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         င္မ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         င္မ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 СБ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                           JOURNAL
                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCCA 441
```

```
TGAGAGCCACGGCGTAGGAGACCACGGGGTTCACGCCGCNCGGCAGCCANGGGAGCCGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCCGGGAGTCGGGATGGACTTGGAAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGCGGCACCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGGTCCTTGGGACCCCGCAAGTCAGTTGGTGCTGCGGCGGCGGCAGAGTGCACATTGACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGCGGCANCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCTGCAGCACGCGGGTCATGGTGGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTGCAGCACGCGGGTCATGGTGGGGCAGTAACCGGCACAGATGGTGGTGTTGACGGTNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCGGGGAGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCCAGGGCGNCAAGACCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGGTCCTTGGGACCCCCGCAGTCAGT-GGTGCTGCGGCGGCAGAGTGCACATTGACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGAGAGCCACAGCGTAGGAGACCACGGGGTTCACGCCGCGGGGCAGCCAGGGAGCCGGA
                                                                                                                                                                                                                                                                                                                                                      gli41650
gli41650
gli41650
EST.

human clone=257711 primer=ml3 -40 forward library-Soares placenta 8to9weeks 2NbHP8to9W vector=pT7T3D (Pharmacia) with a modified polylinker host=DH10B (ampicillin resistant) Rsite1=Not I Rsite2=Eco RI two placentae: one from 8 weeks and another from 9 weeks post conception. 1st strand cDNA was primed with a Not I -
                                                                                Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 473)

Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M.,
Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M.,
Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F.,
Parsons, J., Waterston, R., Williamson, A., Wohldmann, P. and
                                                                                                                                                                                                                                                             Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata;
Deuterostomia; Chordata; Vertebrata; Gnathostomata; Os
Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      yw71f12.s1 Homo sapiens cDNA clone 257711 3' similar to gb:J00117 CHORIOGONADOTROPIN BETA CHAIN PRECURSOR (HUMAN);.
The WashU-Merck EST Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31.5%;
larity 94.6%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 379; DB 13;
Pred. No. 0.00e+00;
0; Mismatches 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 442;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-DEC-1995
                                                                                                                                                                                                                                                                                              Osteichthyes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                            RI adapters
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 964
```

```
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE CO
                                                                                                                                                 RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                              ACCESSION
                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNT
                                                                                                                                                                                                                                                                                                                                                                                                             1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1202
                                                                                                                                                                                                                                                                                                                                      1022
                                                                                                                                                                                                                                                                                                                                                                          1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                  962
                                                                                                                                                                                                        437
                                                                                                                                                                                                                          843
                                                                                                                                                                                                                                            377
                                                                                                                                                                                                                                                              902
                                                                                                                                                                                                                                                                                317
                                                                                                                                                                                                                                                                                                                   257
                                                                                                                                                                                                                                                                                                                                                       198
                                                                                                                                                                                                                                                                                                                                                                                           138
                                                                                                                                                                                      783
                                                                                                                                                                                                                                                                                                                                                                                                                                78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18
                                                                                                                                                                                                                                                                                                                                   GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGTCATCACAGGTCAAGGG 137
                                                                                                                                                                                                                                                                                                                                                                                                                                               ရ
                                                                                                                                                                                                                                                           മ
                                                                                                                                                                                                                                  GTGGTCCTTGGGACCCCGCCAGTCAGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCT 197
                                                                                                                                                                                                                         TGCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGCGCACCGTG
                                                                                                                                                                                                       437
                                                                                           N30036
g1148556
EST.
High quality sequence stops: 225
Source: IMAGE Consortium, LINL
This clone is available royalty-free through LLNL;
IMAGE Consortium (info@image.llnl.gov) for further;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4444 Forest Park Parkway,
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WashU-Merck EST Project Washington University So
                                                                                                                    yw80bll.s1 Homo sapiens cDNA clone 258525 3' similar
CHORIOGONADOTROPIN BETA CHAIN PRECURSOR (HUMAN);.
                                                                                                                                                 N30036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             131.5%;
Similarity 95.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/clone="257711"
<1. >473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .>473
122 c
                                                                                                                                                 548
                                                                                                                                                đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 379; DB 13; Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   School of Medicine way, Box 8501, St. )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                               05-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
                                                                                                                              ៩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                              gb:J00117
          adapters
I and Eco
                                                                                                                                                                                                                                                                                                                  316
                                                                                                                                                                                                                                                                                                                                                                         1023
                                                                                                                                                                                                                                                                                                                                                                                                             1083
                                                                                                                                                                                                                                                                                                903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
```

£ 밁 မှ

ç 밁 င္မ 밁 ç 맑 င္ပ 밁 Сþ g မှ 밁

밁

```
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
RESULT
LOCUS
                                                                                           င္မ
                                                                                                                                                밁
                                                                                                                                                                                      Сþ
                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                       Сb
                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                     ç
                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                           437
                                                                                                                                                                                              845
                                                                                                                                                                                                                                            377
                                                                                                                                                                                                                                                                                                                                                                                          963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            138
                                                                                                785
                                                                                                                                                                                                                                                                                            903
                                                                                                                                                                                                                                                                                                                                            317
                                                                                                                                                                                                                                                                                                                                                                                                                                          257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          78
                                                                                                                                                                                                                                                                                          GATGNACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGGCGGCACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT 77
                                                                                                TGG
                                                                                                                                                                                              GATGCACGGGGCAGCCCTCCTTCTCCACAGCCCAGGGTGGCATTGATGGGGCCGCCACCG
                                                                                                                                                                                                                                                                                                                                                                                          TGGACTCGAAGCGCACATCGCGGTAGTTGCACCACCACCTGAGGCAGGGCGGGGGGGAGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                    TGGACTCGAAGCGCACATCGCGGTAGTTGCACACCTGAGGCAGGGCAGGGCCGGCAAGACCN 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGGTCCTTGGGACCCC-GCAGTCAGTGGTGCTGCCGGCGGCAGAGTGCACATTGACAGCT 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGGGGAGGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 137
                                                                                                                                              TGG 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          410;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         High quality sequence stops: 333
Source: IMAGE Consortium, LLNL
This clone is available royalty-free th
IMAGE Consortium (info@image.llnl.gov)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Washington University School
4444 Forest Park Parkway, Bc
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The WashU-Merck EST Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteicht Sarcopterygil; Choanata; Tetrapoda; Amniota; Manmalia; Theri Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 548)
1 (bases 1 to 548)
1 (hases 1 to 548)
1 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Wilson RK
WashU-Merck EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryotae; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              constructed by
     N30831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31.5%;
Similarity 96.9%;
                                                                                                   783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/clone="258525"
<1...>548
1 143 c 206 g 9:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
  566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bento
đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 379; DB 13; 1
Pred. No. 0.00e+00;
0; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eumetazoa; Bilateria; Coelomata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Soares
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     School of Medicine way, Box 8501, St.
  mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ξ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Elliston, K., Hawkins, M.,
Le, M., Lennon, G., Marra, M.,
, Soares, M., Tan, F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fatima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              through LLNL ;
v) for further !
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Louis,
  EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bonaldo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63108
  05-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Osteichthyes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Theria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                            436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1023
                                                                                                                                                                                                                                                                                                                                                                                        904
                                                                                                                                                                                              786
                                                                                                                                                                                                                                                                                            846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the
```

```
MRNA
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
     Ç
                                        밁
                                                                       င္
                                                                                                           밁
                                                                                                                                              ဌ
                                                                                                                                                                                  밁
                                                                                                                                                                                                               ç
                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                     င္ပ
                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                       1142
                                                                                                                                                                                                                                                                                     1202 TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT 1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                               196
         963
                                                                                                                                                                                    137
                                                                                                                                                                                                                                                        77
                                                                                                                                                                                                                                                                                                       17 TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGACTTGGAAGGCT 76
                                                                                                                                                                                                                                  GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                           GAGAGCCACGGCTTAGGAGACCACGGGGTTCACGCCGCGGCGAAGCCANGGGAGCCGGA
                                    TGGACTCGAAGCGCAAATCGCGGGTAGTTGCACACCACCTGAGGCAGGGCGGCCAGACCC
                                                                       GAGAGCCACAGCGTAGGAGACCACGGGGTTCACGCCGCGCGGCAGCCA-GGGAGCCGGA
                                                                                                                                            GTGGTCCTTGGGACCCCCGCAGTCAGTGGTGCTGCCGGCGGCAGAGTGCACATTGACAGCT
                                                                                                                                                              GTGGTCCTTGGG-CCCCCCGCAGTCAGTGCTGCCGCGGCAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                 GGGGGGAGGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata;
Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichthyes;
Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia; Theria;
Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 566)
Hillier, Clark, N., Dubuque, T., Elliston, K., Hawkins, M.,
Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M.,
Parsons, J., Rikin, L., Rohlfing, T., Soares, M., Tan, F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human clone=257551 primer=m13 -40 forward library=Soares placen 8to9weeks 2NbHP8to9W vector=pT7T3D (Pharmacia) with a modified polylinker host=DHIOB (ampicillin resistant) Rsite1=Not I Rsite2=Eco RI two placentae: one from 8 weeks and another from Rsite2=Eco RI two placentae: one from 8 weeks and another from 1st strand cDNA was primed with a Not I
                                                                                                                                                                                                                                                                                                                                                                407;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           High quality sequence stops: 400 Source: IMAGE Consortium, LLNL
This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WashU-Merck EST Project
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. I
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              yw70b04.s1 Homo sapiens
CHORIOGONADOTROPIN BETA
N30831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The WashU-Merck EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wilson, R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and
                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                   103
                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/clone="257551"
<1. >566
                                                                                                                                                                                                                                                                                                                                                                            31.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  .>566
148 c
                                                                                                                                                                                                                                                                                                                                                          Score 377; DB 13;
Pred. No. 0.00e+00;
0; Mismatches 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                  209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHAIN PRECURSOR (HUMAN);.
                                                                                                                                                                                                                                                                                                                                                          Mismatches 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                  100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Louis,
                                                                                                                                                                                                                                                                                                                                                                                           Length 566;
                                                                                                                                                                                                                                                                                                                                                                                                                                                σ
                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                          ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      modified
                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gb:J00117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              I adapters
                                                                                                                                                                                                                 1083
                                    315
                                                                       964
                                                                                                                                              1023
                                                                                                                                                                               195
                                                                                                                                                                                                                                                  136
     905
                                                                                                         255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 9
                                                                                                                                                                                                                                                                                                                                                          Ψ
```

```
BASE C
                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
 ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   දි
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ç
                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                          Query Match
Best Local S
Matches 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                   mRNA
COUNT
1202 TRATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT 1143
                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           316
                                17
                TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>ନ</u> =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GG 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGCACACGGGGCACCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGGCGGCACCGT 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCCTGCAGCACGCGGTCATGGTGGGGCAGAGTAGCCGGCACAGATGGTGGTGTTGACGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCTGCAGCACGCGGTCATGGTGGGGCAGTAGCGGTCACAGATGGTGGTGTTGACGGTG
                                                                                                                                                                                                                                                                                Contact: Wilson RK
WashU-Merck EST Project
WashIngton University School
4444 Forest Park Parkway, Box
Tel: 314 286 1810
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGCACACGGGGCAGCCCTTCTCCACAGCCAGGGTGGCATTGATGGGGCGGCACCGT
                                                           416;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryotae: Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Ost Sarcopterygil; Choanata; Tetrapoda; Amniota; Mammalia; Eutheria; Archonta; Primates; Catarrhini; Hominidae; Ho 1 (bases 1 to 563)
Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins, Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Mar Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F., Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         yw89a07.s1 Homo sapiens cDNA clone 259380 3' simi CHORIGGONADOTROPIN BETA CHAIN PRECURSOR (HUMAN);. N31955
                                                                                                                                                                                                                                                     High quality sequence stops: 335
Source: IMAGE Consortium, LLNL
                                                                                                                                                                                                                                                                                                                                                                                                     The WashU-Merck EST Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                        This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              constructed by Bento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              783
                                                          h 31.0%;
Similarity 97.0%;
416; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                     Wilson, R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N31955
                                                                                                                                   101
                                                                                                                                     9
                                                                                                                                                             /organism="Homo sapiens"
/clone="259380"
                                                                                                                                                                                            1. .563
                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                  .>563
148 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    563
                                                                                                                                   O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ģ
                                                                                                                                                                                                                                                                                                                                                                                                                    Project
                                                                    Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Soares and M. Fatima Bonaldo.
                                                          0
                                                                                                                                                                                                                                                                                                                             School of Medicine way, Box 8501, St.
                                                                                                                                   208
                                                        re 373; DB 13; I
1. No. 0.00e+00;
Mismatches 7;
                                                                                                                                  g
                                                                                                                                   103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Elliston, K., Hawkins, M.,
                                                                                                                                  đ
                                                                                                                                                                                                                                                                                                                              Louis,
                                                                                     Length
                                                                                                                                  ω
                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  similar
                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-JAN-1996
                                                          6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Marra, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Osteichthyes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   to gb:J00117
                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           375
                                                          9
```

```
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            င္မ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <del>Ç</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATGGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCGGCAAG-AC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGACCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGAGAGCCACGGCGTTAGGAGACCACGGGGTTCACGCCGCGCGCAAGCCANGGGAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGGTCCTTGGGACCCC-GCAGTCAGTTGGTGCTGCGGCGGCAGAGTGCACATTGACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGGGGAGGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGCCAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATGCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGGCGGCACCG 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCC-TGCAGCACGCGGGTCATGGTGGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGAGAGCCACAGCGT-AGGAGACCACGGGGTTCACGCCGCGGGGCAGCCA-GGGAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGGTCCTTGGGACCCCCCCCAGTCAGT-GGTGCTGCGGCGGCAGAGTGCACATTGACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (HUMAN);
AA400910
g2054783
                                                                                                                                                                                                                                                                                                              Hillier, L., Allen, M., Bowles, L., Dubuque, T., Geisel, G., Jost, Kucaba, T., Lacy, M., Le, N., Lennon, G., Marra, M., Martin, J., Moore, B., Schellenberg, K., Steptoe, M., Tan, F., Theising, B., White, Y., Wylie, T., Waterston, R. and Wilson, R. Washd, Merck EST Project 1997
                                                                                                                                                                                                                      Washington University School of Medicine 4444 Forest park Parkway, Box 8501, St. Louis, Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 640 Std Error: 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryotae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          similar to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         zt71h09.s1
                                                                                                                                                                                                                                                                            Contact: Wilson RK
                                                                                                                                                                                                                                                                                                      Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Ho
                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo
                                                                                                                                                                                                                                                                                                                                                                                                     HOMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                          human.
                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 473)
                                                                                                                                    primer: -41m13 fwd. ET from Amersham
n quality sequence stop: 392.
                                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          777
                                  /Organism="Homo sapiens"
/Organism="Homo sapiens"
/Orde="Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; 1st strand was prepared from mRNA obtained from Clottech was prepared from and primed with a Not I - oligo(
ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Soares testis NHT Homo sapiens gb:J00117 CHORIOGONADOTROPIN B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDNA clone
                                                                                                                                                                                                                                                 ĕ
                                                                                                                                                                                                                                                 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12-AUG-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRECURSOR
                                         I - oligo(dT)
                                                                                                                                                                                                                                                                                                                                                                                                                  Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    136
                                                                     CDNA
                                                                                                                                                                                                                                  KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                               RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            င္
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ę
                                                                                                                                                                                                                                                                                                                                                                                   ç
                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            çp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  දි
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
ORIGIN
              REFERENCE
                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
  AUTHORS
                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    140
                                                                                                                                                                                                                                                                                                                                                                                     842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                            Ľ
```

```
GAGAGCCACGGCGTAGGAGACCACGGGGTTCACGCCGGCGCG-CAGCCAGGGAGCCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTATTGTGGGAGGATCGGGGTGTCTGAGGGCCCCCGGGAGTCGGGATGGGCTTGGAAGGCT 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGCGGCAC 429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCGGCCGGNCAG-ACCCC 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGAGCCACAGCGTAGGAGACCACGGGGGTTCACGCCGCGCGGGCAGCCAGGGAGCCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGGGGAGGGCCTTTGAGGAAGAGGAGGCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCACACGGGGCAGCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGCGGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGCAGCACGCGGGTCATGGTGGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -TGCAGCACGCGGGTCATGGTGGGGCAGTAGC-GGCACAGATGGTGGTGTTTGACGGTGAT
                                                                                                                      8to9weeks 2NbHp8to9W vector=pT7T3D (Pharmacia) with a modified polylinker host=DH10B (ampicillin resistant) Rsite1=Not I Rsite2=Eco RI two placentae: one from 8 weeks and another from 9 weeks post conception. 1st strand cDNA was primed with a Not I oligo(dT) primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               405;
                  Deuterostomia; Chordata; Vertebrata; Gnathostomata; Os
Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia;
Eutheria; Archonta; Primates; Catarrhini; Hominidae; H
1 (bases 1 to 479)
                                                                                                                                                                                                                                                                                                                                                                                         N30684
                                                                                                                                                                                                                                                                                                                                                                                                                             yw77h04.s1
                                                                                              Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata;
                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                           CHORIOGONADOTROPIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30.9%;
larity 97.6%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Pharmacia), digested with Not I and cloned into the and Eco RI sites of the modified pT/T3 vector. Librar went through one round of normalization to Cot5, and constructed by Bento Soares and M. Fatima Bonaldo." /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement(<1...>473)
/db_xref="GDB:5924752"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone_lib="Soares testis
                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens cDNA clone 258295 3' similar DOTROPIN BETA CHAIN PRECURSOR (HUMAN);.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 371; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 5
Dubuque, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           190 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             78
    Elliston, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             THN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               σı
••
                                                                            Osteichthyes;
                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        into the N
                                          Homo.
                                                      Theria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                           gb:J00117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ğ
```

```
mRNA
BASE COUNT
ORIGIN
                                                                       KEYWORDS
SOURCE
                                                                                                                                                                                                                        မှ
                                                                                                                                                                                                                                                   용
                                                                                                                                                                                                                                                                             င္မ
                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                ဌ
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                       ę
                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                             ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                               ACCESSION
                                                                                                                                         DEFINITION
                                                                                                                                                                    LOCUS
                                                                                                                                                                                 RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1142
                                                                                                                                                                                                                                                                                                                                                                                           1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                           842
                                                                                                                                                                                                                                                                                                                                      962
                                                                                                                                                                                                                                                                                                                                                                                                                      196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          137
                                                                                                                                                                                                                                                     375
                                                                                                                                                                                                                                                                                                                                                                256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  77
                                                                                                                                                                                 12
                                                                                                                                                                                                                                                                                                                                GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCGGG-AGACCCCC 314
                                                                                                                                                                                                                        GCACACGGGGCAGCCCTCCTTCTCCACAGCCA-GGGTGGCATTGATGGGGCGGCACCGTG
                                                                                                                                                                                                                                     GCACACGGGGCAGCCCTCCTTCCTCCACAGCCANGGGTGGNATTGATGGGGCGGCACNTTG 434
                                                                                                                                                                                                                                                                             TTGCAGCACGCGGGTCATGGTGGGGCACTAGCCCGGCACAGATGGTGGTGTTNACGGTGAT 374
                                                                                                                                                                                                                                                                                                                                                                                        GAGAGCCACAGCGTAGGAGACCACGGGGGTTCACGCCGCGGGGCAGCCAGGGAGCCGGAT 963
                                                                                                                                                                                                                                                                                                                                                                                                     GAGAGCCACGGCNTAGGAGACCACGGGGTTCACGCCGCGCGCGCAGCCANGGGAGCCGGAT 255
                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGGTCCTTGGGACCCCCGCAGTCAGTGGTGCTGCCGGCGGCAGAGTGCACATTGACAGCT 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGGTCCTTGGGACCCC-GCAGTCAGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCT 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT 1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTTGGAAGGCT 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M., Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F., Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and Wilson,R.
The WashU-Merck EST Project Unpublished (1995)
human clone=258890 primer=m13 -40 forward library=Soares placenta 8to9weeks 2NbHP8to9W vector=pT7T3D (Pharmacla) with a modified polylinker host-DH10B (ampicillin resistant) Rsite1-Not I Rsite2-Eco RI two placentae: one from 8 weeks and another from 9 weeks post conception. 1st strand cDNA was primed with a Not I oligo(dT) primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  401;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             High quality sequence stops: 333
Source: IMAGE Consortium, LLNL
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WashU-Merck EST Project
WashIngton University School of Medicine
4444 Forest Park Parkway, Box 8501, St. I
Tel: 314 286 1810
Fax: 314 286 1810
                                                                                                                         yw84a02.s1 Homo sapiens cDNA clone 258890 3' CHORIOGONADOTROPIN BETA CHAIN PRECURSOR (HUM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Wilson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30.9%;
llarity 95.5%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .479
/organism="Homo sapiens"
/clone="258295"
<1. .>479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .>479
122 c
                                                                                                                                                                 đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 372;
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 13;
).00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 c+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Louis, MO
                                                                                                                         (HUMAN);.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   others
                                                                                                                                      similar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ω,
                                                                                                                                      ៩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                      gb:J00117
                                                                                                                                                                                                                                                                             843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
င္ပ
                           밁
                                                   ဌ
                                                                                밁
                                                                                                          မှ
                                                                                                                                   밁
                                                                                                                                                             ç
                                                                                                                                                                                          밁
                                                                                                                                                                                                                  င္မ
                                                                                                                                                                                                                                                멹
                                                                                                                                                                                                                                                                          ç
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                               င္
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                      မှ
                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                  1142
                                                                                                                                                                                                                                                                                                                                                                                       1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                 962
                           434
                                                                                                                                                                                                                                                196
                                                                                                                                                                                                                                                                                                       137
 783
                                                                                 374
                                                                                                                                      314
                                                                                                                                                                                                                                                                                                                                                            77
                                                                                                                                                                                                                                                                                                                                                                                                                  17
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
 G
                         G
```

```
Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGAGCCACGGCGTAGGAGACCACGGGGTTCACGCCGCGGGG-CAGCCAGGGAGCCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGGGGAGGGCCTTTNAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 136
                                                                               GCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATT-GATGGGGCGCACCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGGTCCTTGGGACCCC-GCAGTCAGTGGTGCTGCGGGGGGGAGAGTGCACATINACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGATGGGCTTTGGAAGGCT 1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTANTGTGGGANGATNGGGGTTTNCGANGGCCCCGGGANTNNNNATGGACTTGGNAGGCT 76
                                                                                                                                                              GCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTTGATGGNGCGGCACCGTG
                                                                                                                                                                                                                                        CTGCAGCACGCGGGTCATGGTGGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTGAT
                                                                                                                                                                                                                                                                                                                   TTGCAGCACGCGGGTCATGGTGGGGCCAGTAACCGGCACAGATGGTGGTGTTGACGGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                  GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCGGGGGAGGACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCCGGCAG-ACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGAGCCACAGCGTAGGAGACCACGGGGTTCACGCCGCGGGCAGCCAGGGAGCCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGGTCCTTGGGACCCCCGCAGTCAGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WashU-Merck EST Project
Washington University School
4444 Forest Park Parkway, Box
Tel: 314 286 1810
Fax: 314 286 1810
Email: est@watson.wustl.edu
434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                396;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata; Osteichthyes; Deuterostomia; Chordata; Vartebrata; Gnathostomata; Osteichthyes; Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 446)
1 (bases 1 to 446)
1 (bases 1 to 646)
1 (blases 1 to 646)
1 (blases 1 to 646)
1 (blases 1 to 646)
2 (blases 1 to 646)
2 (blases 1 to 646)
3 (blases 1 to 646)
4 (blases 1 to 646)
4 (blases 1 to 646)
4 (blases 1 to 646)
5 (blases 1 to 646)
6 (blases 1 to 646)
7 (blases 1 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           High quality sequence stops: 329
Source: IMAGE Consortium, LINL
This clone is available royalty-free through LINL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The WashU-Merck EST Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Wilson WashU-Merck EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30.4%;
larity 94.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"Homo sapiens"
/clone="258890"
<1. .>446
a 108 c 170 g 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 365; DB 13;
Pred. No. 0.00e+00;
0; Mismatches 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                School of Medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Box 8501,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       St.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ե
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RI adapters
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1083
                                                                                                                                                                                                                                                                                                                       373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         195
                                                                               784
                                                                                                                                                         433
                                                                                                                                                                                                                                        843
                                                                                                                                                                                                                                                                                                                                                                                                  903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E00
```

```
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
밁
                                        မှ
                                                                                           밁
                                                                                                                                    င္ပ
                                                                                                                                                                                 밁
                                                                                                                                                                                                                            ဌ
                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                 1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                             1082
                                                                                                                                      1142
196 GAGAGCCACGGCGTAGGAGACCACGGGGGTTCACGCCGCGCGG-CAGCCAGGGAGCCGGAT 254
                                                                                                                                                                                                                                                                                                            30.28;
Local Similarity 96.78;
les 407; Conservation
                                                                                                                                                                                    76
                                                                                                                                                                                                                                                     16 TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGACTTGGAAGGCT 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13
                                                                                                                                                              GGCAGGAGGGGCCTTTAAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 135
                                           TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTTGGAAGGCT 1143
                                                                                        GTGGTCCTTGGGACCCCGACAGTCAGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCT 195
                                                                                                                                      GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human.
Homo sapiens
Eukaryotae; Metazoa; Chordata; Vertebrata; Mammalia; Eutheria;
Eukaryotae; Metazoa; Chordata; Homo.

Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 526)

1 (bases 1 to 526)

1 (bases 1 to 526)

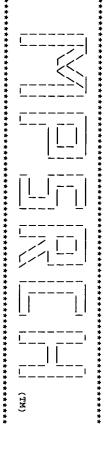
1 (bases 1 to 526)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: -40ml3 fwd. ET from Amersham
High quality sequence stop: 335.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HUMAN); .
AA644163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hillier, L., Allen, M., Bowles, L., Dubuque, T., Geisel, G., Jost Krizman, D., Kucaba, T., Lacy, M., Le, N., Lenon, G., Marra, M., Martin, J., Moore, B., Schellenberg, K., Steptoe, M., Tan, F., Theising, B., White, Y., Wylie, T., Waterston, R. and Wilson, R. Washi-NCI human EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    af62d08.s1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g2569381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA644163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            similar to
                                                                                                                                                                                                                                                                                                                                                                                                                                             100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/note="Organ: mixed (see below); Vector: pT7T3D-Pac
/note="Organ: mixed (see below); Vector: pT7T3D-Pac
(Pharmacia) with a modified polylinker; Site_1: Not I;
Site_2: Eco RI; Equal amounts of plasmid DNA from three
normalized libraries (melanocyte 2NbHM, pregnant uterus
NbHPU, and fetal heart NbHH19W) were mixed, and ss circles
were made in vitro. Following HAP purification, this DNA
was used as tracer in a subtractive hybridization
reaction. The driver was PCR-amplified cDNAs from pools of
5,000 clones made from the same 3 libraries. The pools
consisted of I.M.A.G.E. clones 260232-265223,
340488-345479, and 484488-489479."
                                                                                                                                                                                                                                                                                                                                                                                                                                             ø
                                                                                                                                                                                                                                                                                                                                                                                                                                      /tissue_type="Pooled human pregnant uterus" /lab_host="DH10B" 140 c 201 g 85 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="1046607"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone_lib="Soares NhHMPu S1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Soares NhHMPu S1 Homo sapiens cDNA clone 1046607 3' gb:J00117 CHORIOGONADOTROPIN BETA CHAIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               đđ
                                                                                                                                                                                                                                                                                                                        Score
Pred.
0; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA
                                                                                                                                                                                                                                                                                                                     363; DB 28; Le
. No. 0.00e+00;
Mismatches 8;
                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              melanocyte,
                                                                                                                                                                                                                                                                                                                                                                   Length 526;
                                                                                                                                                                                                                                                                                                                          Indels 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Geisel, G., Jost, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              fetal heart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27-OCT-1997
                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
                                                                                                                                                                                                                                                                                                                          6
```

```
ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               င္ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ပ္
                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1022
                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       842 G-CACACGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGCGGCACCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               783 G 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           431 G 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   314 -TGCAGCACGCGGGTCATGGTGGGGCAGTAGC-GGCACAGATGGTGGTGTTGACGGTGAT 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGCAGCACGCGGTCATGGTGGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGCGG-ACCGTG 430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCGGGGGGGAGGACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCCAGGGCGGC-AGGACCCC 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g1855917
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                       Insert Length: 834 Std Error: 0.00
Seq primer: -41ml3 fwd. ET from Amersham
High quality sequence stop: 361.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. I Tel: 314 286 1800 Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hillier, L., Allen, M., Bowles, L., Dubuque, T., Geisel, G., Jos. Kucaba, T., Lacy, M., Le, N., Lennon, G., Marra, M., Martin, J., Moore, B., Schellenberg, K., Steptoe, M., Tan, F., Theising, B., White, Y., Wylle, T., Waterston, R. and Wilson, R. Washl-Merck EST Project 1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        zr46c04.s1 Soares NhHMPu S1 Homo sapiens cDNA clone 666438 3' similar to gb:J00117 CHORIOGONADOTROPIN BETA CHAIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This clone is available royalty-free through LLNL; IMAGE Consortium (info@image.llnl.gov) for further insert Length: 834 Std Error: 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
Eukaryotae; n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Vertebrata; Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (HUMAN);.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 400)
                                                                                                            /organism="Homo sapiens"
/note="Organ: mixed (see below); Vector: pT7T3D-Pac
/note="Organ: mixed (see below); Vector: pT7T3D-Pac
/Pharmacia) with a modified polylinker; Site_1: Not I;
Site_2: Eco RI; Equal amounts of plasmid DNA from three
normalized libraries (melanocyte 2NbHM, pregnant uterus
NbHPU, and fetal heart NbHH19W) were mixed, and ss circles
were made in vitro. Following HAP purification, this DNA
was used as tracer in a subtractive hybridization
reaction. The driver was PCR-amplified CDNAs from pools
5,000 clones made from the same 3 libraries. The pools
consisted of I.M.A.G.E. clones 260232-265223,
340488-345479, and 484488-489479."
/tissue_type="Pooled human
pregnant uterus"
                                                                    /db_xref="taxon:9606"
/clone="666438"
                                              clone_lib="Soares NhHMPu S1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mitochondrial eukaryotes; Metazoa; Chordata; Mammalia; Eutheria; Primates; Catarrhini; Ho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA
                        melanocyte, fetal heart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Louis, MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Geisel, G., Jost, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-AUG-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               963
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               င္မ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ද
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
 FEATURES
                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                      EYWORDS
                                                                                                                                                                                                                                                                                                                                                               CCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 37
                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17
                                                                                                                                                                                                                                                                                                                                                                                                                                          15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCGGTCAG-AGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGGGGAGTGGCCTTTGAGGAAGAGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCACACGGGGCAGCCCTCCTTCTCCA 817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCACACGGGGCAGCCCTCCTTCTCCA 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGAGCCACAGCGTAGGAGACCACGGGGGTTCACGCCGCGCGGGCAGCCAGGGAGCCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGGTCCTTGGGACCCCCGCAGTCAGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGGTCCTTGGGACACCCGCAGTCAGTGGTGCTGCGGCGGCAGGAGGGACATTGACAGCT 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGCAGCACGCGGGTCATGGTGGGGCAGTAGC-GGCACAGATGGTGGTGTTGACGGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ch 29.5%;
l Similarity 97.2%;
375; Conservative
                                                                                                                                                                                                                                                                                                                                      g1382299
EST.
                                                                                                                                                                                                                                                                                                                                                              zd66b03.s1 Soares fetal heart NbHH19W Homo sapiens 345581 3' similar to gb:J00117 CHORIOGONADOTROPIN B PRECURSOR (HUMAN);.
          Contact: Wilson RK
WashU-Merck EST Project
WashIngton University School of Medicine
4444 Forest Park Parkway, Box 8501, St. I
                                                                                                                                                                                                               Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 531)
Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M., Holman, M., Kucaba, T., Le, M., Lennon, G., Marra, M. Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F., Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and
                                                                                                                                                                                                                                                                                                                      human.
                                                                                     Tel: 314 286 1800 Fax: 314 286 1810
                                                                                                                                                                              The WashU-Merck EST Project Unpublished (1995)
                                                                                                                                                                                                          Wilson, R.
                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                              W71989
quality sequence stop:
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement(<1. .>400)
/db_xref="GDB:5428470"
1 98 c 165 g
                                                                                                                                                                                                                                                                                                                                                                                                                           531
                                                                                                                                                                                                                                                                                                                                                                                                                          ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 354; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    165 g
                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9;
                                                                                                               Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                           EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                    SETA CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                          17-OCT-1996
                                                                                                                                                                                                                                           Marra, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               903
```

```
BASE COUNT
ORIGIN
                                                                                                                   ç
                                                                                                                                                                                                                                    Çþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
      င္ပ
                                                               유
                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                       ç
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            င္ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 29.1%;
Best Local Similarity 93.1%;
Matches 391; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1142
                                                                                                                                                                                                                                                                                                                                                          1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
      844
                                                                                                                                                                                                                                                                                                                                                                                                                    197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     138
                                                                                                                                                                                                                                          962
                                                                                                                                                                                317
                                                                                                                                                                                                                                                                                                    257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         78
TTGCAGCACGCGGGTCATGGTGGGGGCAGTAACCGGCACAGATNGTGGTGTTTGACGGTTG
                                                                                                                                                                                                                                                                  GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCGGCAAGACCCCCC
                                                                                                                                                                                                                                                                                                                                                                                      GTGGTCNTTGGGACCCC-GCAGTCAGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NNNGGGAGGGCCTTTGAGGAAGAGAGTCCTGGAAGCGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                       GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCGGGGGGGAGGACCCC
                                                                                                                                                                                                                                                                                                                                                    GAGAGCCACAGCGTAGGAGACCACGGGGTTCACGCCGCGCGGGCAGCCAGGGAGCCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGGTCCTTGGGACCCCCGCAGTCAGTGGTGCTGCTGCGGCGGCAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /Organism="Homo sapiens"
//Organism="Homo sapiens"
//Organism sapiens
//Organism sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /dev_stage="19 weeks"
/lab_host="DH10B (ampicillin
complement (<1...>531)
a 125 c 193 g 93 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NbHL19W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_lib="Soares fetal
/sex="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:9606"
/clone="345581"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 350; DB 16;
Pred. No. 0.00e+00;
0; Mismatches 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           heart
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "MOHH19W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 531;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1143
                                                            435
                                                                                                                                                                             376
                                                                                                                                                                                                                                                                                                 316
                                                                                                                                                                                                                                                                                                                                                                                                                 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      137
      785
                                                                                                                   845
                                                                                                                                                                                                                                       903
                                                                                                                                                                                                                                                                                                                                                       963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4
```

Search completed: Wed May 6 13:37:32 1998 Job time: 1115 secs.



Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Wed May 6 08:56:17 1998; MasPar time 9.51 Seconds 482.526 Million cell updates/sec

Tabular output not generated.

Description: Perfect Scor >US-08-804-166-4 (1-307) from US08804166.pep 2341

Sequence: Score: SRTSLLLAFGLLCLPWLQEG......PSLPSPSRLPGPSDTPILPQ 307

Scoring table: PAM 150 Gap 11

Searched: 120837 seqs, 14945562 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

-geneseq31
1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26

Statistics: Mean 32.496; Variance 135.826; scale 0.239

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

Result No.	Score	Query Match	Length	BB	ID	Description	Pred. No.
ב	2341	100.0	307	26	W33358	TBP(20-161)/hCG-beta	9.21e-224
ນ	2022	86.4	336	26	W33360	$\mathbf{Z}$	
ω	1321	56.4	256	26	W33357	TBP(20-161)/hCG-alpha	1.84e-119
4	1289	55.1	285	26	W33359	TBP(20-190)/hCG-alpha	3.29e-116
ۍ	1124	48.0	161	G	R27496	Native 30 kD TNF inhi	1.82e-99
6	1124	48.0	199	4	R24080	Truncated TNF-alpha 5	1.82e-99
7	1124		309	13	R70108	1	1.82e-99
8	1124	48.0	371	N	R07449	Tumour Necrosis Facto	1.82e-99
9	1124	48.0	451	<u>1</u> 3	R70107	TNF-R-GBP 130 fusion	1.82e-99
10	1124	48.0	455	æ	R42059	Lambda derived TNF-R.	1.82e-99
11	1124	48.0	455	N	R10986	30kD TNF inhibitor pr	1.82e-99
12	1124	48.0	455	4	R20787	TNF-alpha binding pro	1.82e-99
13	1124	48.0	455	14	R75084	p55 TNF-R.	1.82e-99
14	1124	48.0	455	N	R07451	Human Tumour Necrosis	1.82e-99
15	1124	48.0	455	N	R11082	Human 55kD TNF-bindin	1.82e-99
16	1124	48.0	455	4	R24000	TNF-alpha 55kD recept	1.82e-99
17	1124	48.0	547	13	R70104	т.	1.82e-99
18	1124	48.0	884	13	R70109	_	1.82e-99
19	1124	48.0	900	13	R70103		1.82e-99

Ş 멍

ш سا

Query Match
Best Local S
Matches 30

100.0%; Similarity 100.0%; Conservative

Score 2341; DB 26; Pred. No. 9.21e-224; 0; Mismatches 0;

Length Indels

307; 0

Gaps

0

60 60 307;

1124 48.0 1245 13 R70106 TNF-R-P1. vivax Duffy 1124 48.0 1604 13 R70105 TNF-R-EBA 175 fusion 1118 47.8 43 8 R51032 Mutant p55 tumour nec 1118 47.8 445 8 R51033 Mutant p55 tumour nec 1118 47.8 455 8 R51034 Mutant p55 tumour nec 1118 47.8 455 8 R51034 Mutant p55 tumour nec 1118 47.8 455 8 R51034 Mutant p55 tumour nec 1118 47.8 455 8 R71259 1100 47.4 455 3 R12550 Type I TNF receptor. 1101 47.4 455 3 R15174 hCG histidine substit 1021 43.6 145 3 R15171 hCG methionine substit 1021 43.6 145 3 R15170 Human chorionic gonad 1022 43.7 145 3 R15170 Human chorionic gonad 1022 43.7 145 3 R15170 Human chorionic gonad 1022 43.7 145 3 R15117 hCG/hLH chimera, A3. 1020 43.6 145 3 R15117 hCG/hLH chimera, A3. 1020 43.6 145 3 R15117 hCG/hLH chimera, A3. 1020 43.6 145 3 R15117 hCG/hLH chimera, B3. 1020 43.6 145 3 R15117 hCG histidine substit 1021 43.6 265 15 R86249 Single chain gonadotr 1021 43.6 265 15 R86259 hCG histidine substit 1021 43.4 145 3 R15173 hCG histidine substit 1021 43.4 145 3 R15173 hCG histidine substit 1021 43.3 145 24 W27681 Chorionic gonadotroph 1013 43.3 145 3 R15170 hCG histidine substit 1021 43.3 145 24 W27687 Chorionic gonadotroph 1013 43.3 145 24 W27687 Chorionic gonadotroph	444	4 4 2	4 0 1 1	39	37	36	35	ω u 4	32	31	30	29	28	27	26	25	24	23	22	21	20
0 1245 13 R70106 TNF-R-PH. 0 1604 13 R70105 Mutant p5: 8 443 8 R51032 Mutant p5: 8 445 8 R51033 Mutant p5: 8 455 8 R51034 P55 Tumou. 4 455 3 R12550 Type I TN 0 165 3 R15043 Human cho. 145 3 R15174 hCG methi. 6 145 3 R15171 hCG methi. 6 145 25 W31200 Human cho. 6 145 26 W31200 Human cho. 6 145 3 R15117 hCG/hLH c. 6 145 3 R15173 hCG hIstin 6 265 15 R86259 hCG/hLH c. 6 145 3 R15173 hCG hIstin 6 145 3 R15103 hCG/bLH c. 7 R15103 hCG/bCH conic	1013	1013	1016 1014	1015	1018	1021	1021	1020	1020	1021	1021	1022	1025	1030	1110	1118	1118	1118	1118	1124	1124
13 R70106 TNF-R-P1. 13 R70105 TNF-R-EBA 13 R70105 TNF-R-EBA 14 R701032 Mutant p5; 18 R51033 Mutant p5; 18 R451034 Mutant p5; 18 R451034 Mutant p5; 18 R451034 Mutant p5; 18 R451034 Mutant p5; 18 R45104 Pype I TNOU. 25 R15171 hCG methi. 26 R15171 hCG methi. 27 R15117 hCG methi. 28 R15117 hCG methi. 29 R15117 hCG methi. 20 R15117 hCG methi. 21 R86259 HUMAN CG/NLH c. 22 R1517 hCG histi. 23 R1517 hCG histi. 24 R27688 Chorionic 25 R1517 hCG methi. 26 R1517 hCG histi. 27 R1510 hCG histi. 28 R1517 hCG histi. 29 R27688 Chorionic 20 R1517 hCG methi. 21 R27682 Chorionic	43.3	<b>ω</b> ω	ັນ ເນ	ωü	ີພ	ü	ω	w i	·w	Ü	Ü	ũ	Ü	4.		٠	7.	7.	7.	œ	ω.
13 R70106 TNF-R-P1. 13 R70105 TNF-R-EBA 13 R70105 TNF-R-EBA 14 R701032 Mutant p5; 18 R51033 Mutant p5; 18 R51034 Mutant p5; 18 R451034 Mutant p5; 18 R451034 Pype I TNOU. 25 R15174 hCG methi. 26 R15170 Human cho. 27 R15117 hCG methi. 28 R15117 hCG methi. 29 R15117 hCG methi. 20 R15117 hCG methi. 21 R15117 hCG methi. 22 W31200 Human cho. 23 R15117 hCG methi. 24 R15117 hCG methi. 25 R31510 hCG/hLH c. 26 R31517 hCG histi. 27 R1517 hCG histi. 28 R1517 hCG histi. 29 R27688 Chorionic. 20 R1510 hCG/biH c. 3 R15170 hCG methi. 21 W27682 Chorionic. 22 W27682 Chorionic. 23 R15170 hCG methi. 24 W27682 Chorionic. 26 R27682 Chorionic. 27 W27682 Chorionic.	145 145	145	181 145	145	145	265	265	145	145	145	145	145	145	165	455	455	455	443	433	1604	1245
TNF-R-P1. TNF-R-EBA Mutant p5; Mutant p5; Mutant p5; Mutant p5; p5 Tumouu Type I TNN Human cho; hGG histii hGG/hLH c; hGG/hLH c; hGG/hLH c; hGG methii single che Partially hGG histii Chorionic Chorionic chorionic chorionic	24 24	ա ա ։	15 24	ω <sup>4</sup>	, ω	15	15	w u	25	ω	ω	w	σ	w	ω	œ	8	œ	œ	13	13
Replace of the control of the contro	W27687 W27682	R15170	R86258 W27688	W2/581 R15177	R15173	R86259	R86247	R15169	W31200	R15120	R15171	R15174	R30999	R15043	R12550	R42197	R51034	R51033	R51032	R70105	010
	Chorionic gonadotroph	hCG/bLH chimera, D7.	Human CG beta-subunit Chorionic gonadotroph	histic	hCG histidine substit	Partially deglycosyla	chain gonadot	methionine subst		/hLH chimera	methionine	histidine s	chorionic	chorionic gona	I TNF receptor.	Tumour necrosi	t p55 tumour	t p55 tumour	t p55 tumour	R-EBA 175 fu	-R-Pl. vívax

## ALIGNMENTS

```
THE SULTANA ACCORDED TO THE SU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21-AUG-1997.
20-FEB-1997; UO2315.
20-FEB-1996; US-011936.
(ISTF ) ARS APPLIED RES SY
Campbell RK, Chappel SC, J
WPI; 97-425036/39.
                                                                                                                                                                                                                                                               N-PSDB; T94008.

N-PSDB; T94008.

Hybrid dimeric protein comprising two co-expressed units - each based on receptor or ligand and a subunit of a heterodimeric hormone, especially FSH, for inducing follicular maturation Example; Pages 34-35; 60pp; English.

Example; Pages 34-35; 60pp; English.

A novel fusion protein comprises 2 dimer forming co-expressed amino acid sequences, each consisting of a homodimeric or heterodimeric receptor chain or ligand, with ligand receptor binding activity, bound directly or via a peptide linker to a subunit of a heterodimeric protein hormone capable of forming a heterodimer with the hormone's other subunits. The fusion protein, e.g. the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           W3358 standard; Protein; 307 AA.
W3358;
W3358;
19-MAR-1998 (first entry)
TBP(20-161)/hCG-beta fusion protein.
Fusion protein; thrombopoietin; TPO; human chorionic gonadotrophin; beta subunit; hCG-beta.
thrombopoletin (TPO)/human chorionic gonadotrophin-beta subunit (hGG-beta) fusion protein denoted by the present sequence, significantly increases the biological activity of the hormone component, reducing the requirement for hormone itself and the number of injections needed.

Sequence 307 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9730161-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
279..1202
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SYSTEMS HOLDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jameson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               $
```

```
IRESULT
PRESULT
PRESUL
                                                                                                                                                                         Š
                              밁
                                                                             Ş
                                                                                                                                밁
                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hybrid dimeric protein comprising two co-expressed units - each PT based on receptor or ligand and a subunit of a heterodimeric Protein compressed inducing follicular maturation PS Example; Pages 39-40; 60pp; English.

CC A novel fusion protein comprises 2 dimer forming co-expressed amino CC receptor chain or ligand, with ligand-receptor binding activity, CC bound directly or via a peptide linker to a subunit of a CC the hormone's other subunits. The fusion protein for subunit of a CC thrombopoietin (TPO)/human chorionic gondatorophin-beta subunit CC (hCG-beta) fusion protein denoted by the present sequence, component, reducing the requirement for hormone itself and the CC component, reducing the requirement for hormone itself and the CC number of injections needed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-FEB-1997; U02315.
20-FEB-1996; US-011936.
(ISTF ) ARS APPLIED RES S)
Campbell RK, Chappel SC, Campbel SC, WPI; 97-425036/39.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TBP(20-190)/hcG-beta fusion protein. Fusion protein; thrombopoletin; TPO; beta subunit; hcG-beta. Homo sapiens. W09730161-11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           W33360 standard;
W33360;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19-MAR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                 181
                                                                                  121
                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                 61
                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                  1 srtslllafgllclpwlqegsadsvcpqgkylhpqnnsicctkchkgtylyndcpgpgqd
                                                                                                                                                                                                                                                                             ш
                                                                       tdcrecesgsftasenhlrhclscskcrkemgqveissctvdrdtvcgcrknqyrhywse 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nlfqcfncslclngtvhlscqekqntvctchagfflrenecvscagagprcrpinatlav
1envkgtedsgttagagprcrpinatlavekegcpvcitvntticagycptmtrvlqgv1
                                                                                                                                                                            TDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSE 120
                                                                                                                                                                                                                                                                           SRTSLLLAFGLLCLPWLQEGSADSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DIPILPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             dtpilpq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFESIRLPGCPRGVNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ekegcpvcitvntticagycptmtrvlqgvlpalpqvvcnyrdvrfesirlpgcprgvnp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tdcrecesgsftasenhlrhclscskcrkemgqveissctvdrdtvcgcrknqyrhywse 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NLFQCFNCSLCLNGTVHLSCQEKQNTVCTCHAGFFLRENECVSCAGAGPRCRPINATLAV
                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 T94022.
                                                                                                                                                                                                                                                                                                                                                                          86.4%;
larity 91.4%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SYSTEMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jameson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               336
                                                                                                                                                                                                                                                                                                                                                                                                 Score 2022; DB 26;
Pred. No. 4.77e-191;
                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               $
                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HOLDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human chorionic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gonadotrophin;
                                                                                                                                                                                                                                                                                                                                                                          29;
                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                           180
                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                             164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                          ۲,
```

```
RESULT
ID W3
AC WI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hybrid dimeric protein comprising two co-expressed units - each probased on receptor or ligand and a subunit of a heterodimeric hormone, especially FSH, for inducing follicular maturation Example; Pages 32-33; 60pp; English.

Can novel fusion protein comprises 2 dimer forming co-expressed amino caid sequences, each consisting of a homodimeric or heterodimeric creceptor chain or ligand, with ligand-receptor binding activity, common comprises 2 dimer forming co-expressed amino caid sequences, each consisting of a homodimeric or heterodimer with ligand-receptor binding activity, common directly or via a peptide linker to a subunit of a heterodimeric protein hormone capable of forming a heterodimer with the hormone's other subunits. The fusion protein, e.g. the thrombopoletin (TPO)/human chorionic gonadotrophin-alpha subunit (DG-alpha) fusion protein denoted by the present sequence, significantly increases the biological activity of the hormone component, reducing the requirement for hormone itself and the component, reducing the requirement for hormone itself and the componence 256 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (ISTF ) ARS APPLIED Campbell RK, Chappe WPI; 97-425036/39. N-PSDB; T94007.
                                                                          TBP(20-190)/hCG-alpha fusion pro
Fusion protein; thrombopoletin;
alpha subunit; hCG-alpha.
Homo sapiens.
WO9730161-Al.
21-AUG-1997.
20-FEB-1997; U02315.
20-FEB-1996; US-011936.
                                                                                                                                                                                                          T 4
W33359 standard; Protein; W33359;
W33359;
19-MAR-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fusion protein; thrombopo alpha subunit; hCG-alpha.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TBP(20-161)/hCG-alpha fusion pro
Fusion protein; thrombopoietin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               W33357
W33357;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-AUG-1997.
20-FEB-1997; U02315.
20-FEB-1996; US-011936.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
WO9730161-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      L9-MAR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  212
                                                                                                                                                                                                                                                                                                                                                                 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tdcrecesgsftasenhlrhclscskcrkemgqveissctvdrdtvcgcrknqyrhywse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cddprfqdsssskapppslpspsrlpgpsdtpilpq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDDPRFQDSSSSKAPPPSLPSPSRLPGPSDTPILPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PALPQVVCNYRDVRFESIRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              palpqvvcnyrdvrfesirlpgcprgvnpvvsyavalscqcalcrrsttdcggpkdhplt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          h 56.4%;
Similarity 98.8%;
169; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLIED RES :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -- AGAGPRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SYSTEMS HOLDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jameson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1321; DB 26;
Pred. No. 1.84e-119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein.
in; TPO;
                                                                                                                                                                               protein.
                                                                                                                                                                                                                                                                 Å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₹
                                                                                                                                                            TPO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                            human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             307
                                                                                                                                                            chorionic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            chorionic gonadotrophin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                            gonadotrophin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
or The sequence shows a native 30 kD TNF inhibitor which may be modified to contain at least one non-native cysteine residue, pref. modified to contain at least one non-native cysteine is this positions 1, 14, 105, 111 and/or 165. The non-native cysteine is joined to a non-peptidic polymer, pref. monomethoxy program this non-peptidic spacer. The modified polypeptides show improved pharmokinetic properties, i.e. increased mol. wt. hence reduced containetic properties, i.e. increased mol. wt. hence reduced sol. of native TNF inhibitors, and reduced antigenicity. The polypeptides may be used for treatment of TNF mediated diseases such as adult respiratory distress syndrome, pulmonary fibrosis, rheumatoid arthritis, inflammatory bowel disease and septic shock. The same method may be applied to the interleukin-l receptor antagonist
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             based on receptor or ligand and a subunit of a heterodimeric hormone, especially FSH, for inducing follicular maturation Example: Pages 37-38; 60pp; English.

A novel fusion protein comprises 2 dimer forming co-expressed amino acid sequences, each consisting of a homodimeric or heterodimeric receptor chain or ligand, with ligand-receptor binding activity, bound directly or via a peptide linker to a subunit of a heterodimeric protein hormone capable of forming a heterodimer with the hormone's other subunits. The fusion protein, e.g. the thrombopoietin (TPO)/human chorionic gonadotrophin-alpha subunit (hCG-alpha) fusion protein denoted by the present sequence, significantly increases the biological activity of the hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (ISTF ) ARS APPLIED RES SYSTEMS HOLDING Campbell RK, Chappel SC, Jameson BA; WPI; 97-425036/39.
N-PSDB; T94021.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tumour necrosis factor; ethylene glycol; pharmokinetic; adult respiratory distress syndrome; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                component, reducing the requirement for hormone itself and the number of injections needed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; T94021
Hybrid dimeric protein comprising
                                                                                                                                                                                                                                                                           New ethylene glycolated polypeptide(s) with improved pharmacokinetic properties - for treating e.g. TNF and IL-1 mediated diseases, e.g. adult respiratory distress syndrome, rheumatoid arthrilis, septic shock etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R27496 standard;
R27496;
                                                                                                                                                                                                                                                                                                                                                                                                                    01-OCT-1992.
13-MAR-1992; U02122.
15-MAR-1991; US-669862.
17-JAN-1992; US-822296.
                                                                                                                                                                                                                                                                                                                                                             Armes LG, Brewer M
WPI; 92-348933/42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       septic shock; pulmonary fibrosis; spacer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                  (SYND ) SYNERGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 srtslllafgllclpwlqegsadsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqd 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nlfqcfnctlclngtvhlscqekqntvctchagfflrenecvscs 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tdcrecesgsftasenhlrhclscskcrkemgqveissctvdrdtvcgcrknqyrhywse 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NLFQCFNCSLCLNGTVHLSCQEKQNTVCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SRTSLLLAFGLLCLPWLQEGSADSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSE 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  163;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                Brewer MT, Evans RJ, Kohno T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    kD TNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                285 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein; 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 55.1%;
98.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1289; DB 26;
Pred. No. 3.29e-116;
2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    two co-expressed units - easubunit of a heterodimeric
                                                                                                                                                                                                                                                                                                                                                                                Thompson RC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            each
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ဂ္ဂဇ္လ
                                                                     밁
                                                                                              Š
                                                                                                                            В
                                                                                                                                                       δõ
                                        Ş
                                                                                                                                                                                     밁
RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 142; Conser
                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 142; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Truncated TNF-alpha 55kD receptor.

tumour necrosis factor alpha; extracellular binding domain; treatment; pulmonary diseases; septic shock; HIV infection; AIDS; malaria; viral meningits; graft versus host disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                              This sequence is a truncated TNF alpha receptor derivative, as encoded in pTNFRecd. This was produced as described in Q24440. This derivative lacks the 81 carboxyl terminal residues of the cytoplasmic domain. The derivative could be used in the regulation of TNF alpha mediated responses by binding and sequestering human TNF-alpha e.g. in the treatment of pulmonary diseases, septic shock, HTV infection, malaria, viral meningitis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-OCT-1990; GB-022648.
(CHAR-) CHARING CROSS SUNLEY RES CENT.
Brennan FM, Feldmann M, Gray FW, Turner MJC;
WPI; 92-167156/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                   treating autoimmune disease, septic shock, HIV etc. Example; Fig 7; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               New polypeptide capable of binding human TNF alpha - comprises first three cysteine-rich subdomains of TNF alpha receptor for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-PSDB; Q24441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
W09207076-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             autoimmune disease; rheumatoid arthritis.
                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                 graft versus host disease and autoimmune diseases, esp. rheumatoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R24080
                                                                                                                                                                                                                                                                                     See also Q24440-51,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-APR-1992.
                                          143
                                                                     161
                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23
                                                                                                 83
                                                                                                                                                          23
                                                                                                                                                                                     41
                                                         kqntvctchagfflrenecvscs
                                                                                                                scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                         dsvcpqgky1hpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhcl 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       kqntvctchagfflrenecvscs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     dsvcpqgky1hpqnns1cctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhcl
                                                                                                                                                          DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KONTVCTCHAGFFLRENECVSCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                 SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                          KONTVCTCHAGFFLRENECVSCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161 AA;
                                                                                                                                                                                                                                                                           199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first
                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                           Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein; 199
                                                                                                                                                                                                                              48.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            48.0%;
99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       See also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entry)
                                                                                                                                                                                                                                                                                       R24000,
                                                                                                                                                                                                               Score 1124;
Pred. No. 1.
1; Mismatc
                                                                                                                                                                                                                                                                                       R24080-84,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1124; DB 5;
Pred. No. 1.82e-99;
1; Mismatches 0
                                          165
                                                                     183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                              DB 4;
                                                                                                                                                                                                                                                                                        R27585, Q29236-8
                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 161;
                                                                                                                                                                                                                                           Length 199;
                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                  ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                          82
                                                                                                   142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

ㅂ

R70108 standard; Protein; 309

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                           용
                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PT a receptor peptide.

PS Example A; Page 54-55; 93pp; English.

CC Hybrid peptides for binding cytokines, comprising a malaria parasite

CC (Plasmodium falciparum) peptide (capable of binding to a red blood

CC (cell (RBC)) and a receptor peptide are claimed. R70103-25 are examples

CC of these hybrid peptides. R70108 is a fusion of tumour necrosis factor

CC receptor (in accordance with H Loetscher et al cell, Vol. 61, 351-359)

CC and glycophorin binding protein (GBP) homologue (GBPH). The

CC use of cytokine receptors not normally found on RBCs means that the

CC tytokine can bind harmlessly to the RBC without deleterious effect.

CC The RBC protects the hybrid peptides from excretion from the kidney, and

CC due to steric hindrance prevents the cytokines binding to a receptor in

CC another cell. GBP 130 or GBPH are the prefd. malaria parasite peptides

CC used, others include EBA 175 (175 kDa erythrocyte binding antigen), PMMSA

CC molecule (eg. exhibited by Plasmodium vivax). These peptides bind

CC molecule (eg. exhibited by Plasmodium vivax) are peptides bind

CC pref. glycophorin A, B and C, stalo glycoproteins, found on the surface

CC cytokines in the circulation to reduce pathological damage.

So Sequence 309 AA:
                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 142; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W09506737-A.
09-MAR-1995
01-SEP-1994; G01900.
03-SEP-1994; GB-018350.
23-AUG-1994; GB-017021.
(PREN/) PRENDERGAST K F.
                                               Tumour necrosis factor binding pTNF-BP15; infectious disease; autoimmune disease; shock.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-NOV-1995 (first entry)
TNF-R-GBPH fusion protein.
Hybrid peptide; melaria parasite; Plasmodium falciparum; fusion protein; red blood cell; cytokine receptor; glycophorin binding peptide 130; GBPH; glycophorin binding peptide homologue; glycophorin A; tumour necrosis factor receptor; TNF-R.
                                                            Tumour Necrosis Factor-Binding Protein from pTNF-BP15 cDNA.
Tumour necrosis factor binding protein; TNF-BP; TNF-receptor;
pTNF-BP15; infectious disease; parasitic disease; cachexia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Prendergast KF;
WPI; 95-115452/15.
New hybrid peptide(s) for binding cytokine(s) - comprising a malaria parasite peptide capable of binding a red blood cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Key Location/Qualifiers misc_difference 230..269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chimeric Homo sapiens.
Chimeric Plasmodium falciparum
              Homo sapiens.
EP-393438-A.
                                                                                                                   R07449;
29-JAN-1991 (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cytokines in the Sequence 309
                                                                                                                                                        R07449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R70108;
10-NOV-1995
                                                                                                                                                                                                                         143
                                                                                                                                                                                                                                                           140
                                                                                                                                                                                                                                                                                            83
                                                                                                                                                                                                                                                                                                                              80
                                                                                                                                                                                                                                                                                                                                                              23
                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                         kqntvctchagfflrenecvscs 162
                                                                                                                                                                                                                                                                                     scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclnqtvhlscqe 139
                                                                                                                                                                                                                       KONTYCTCHAGFFLRENECVSCA 165
                                                                                                                                                    standard;
                                                                                                                                                                                                                                                                                                                                                                                                                              48.0%;
llarity 99.3%;
Conservative
                                                                                                                                                    protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /label= repeat_region
/note= "can be repeated n
                                                                                                                    entry)
                                                                                                                                                      371
                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1124; DB 13;
Pred. No. 1.82e-99;
1; Mismatches 0;
                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             times, where n is a real
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 309;
                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                          79
                                                                                                                                                                                                                                                                                                                                                            82
                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
PT a receptor peptide.

PS Example A; Page 53-54; 93pp; English.

CC (Plasmodium falciparum) peptide (capable of binding to a red blood CC (Plasmodium falciparum) peptide (capable of binding to a red blood CC cell (RBC)) and a receptor peptide are claimed. R70103-25 are examples CC of these hybrid peptides. R70107 is a fusion of tumour necrosis factor CC receptor (in accordance with H Loetscher et al Cell, Vol. 61, 351-359) CC and glycophorin binding protein (GBP) 130. The use of cytokine can bind CC nather the CC without deleterious effect. The RBC protects the CC hindrance prevents the cytokine strong peptides from excretion from the kidney, and due to steric CC hindrance prevents the cytokine are the prefid. malaria parasite peptides CC used, others include EBA 175 (175 kDa erythrocyte binding antigen), owners for major major merozoite surface antigen) and the Duffy binding
                       TRESULT PROPERTY OF COMMENT OF THE STATE OF COMMENT OF THE STATE OF COMMENT OF THE STATE OF THE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        treatment and to understand mechanisms to TNF action
PS Disclosure; Fig 1(1-3); 51pp; German.
CC Clone pTNF-BP15 was used to contruct pADTNF-BP, for transfection of
CC e.g. COS7 cells. The expressed proteins are useful
CC prophylactically and therapeutically to control disorders which
CC involve the damaging effects of TNF-alpha or -beta (e.g. infectious or
CC parasitic diseases, shock, cachexia, autoimmune diseases, adult
CC respiratory distress syndrome etc., or side effects of treatment with
CC TNG-alpha). They can also be used as diagnostic reagents for
CC assaying TNF and in study of TNF-receptor interactions.
SQ Sequence 371 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Matc
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  red blood cell; cytokine receptor GBP 130; GBPH; glycophorin bindin Chimeric Homo sapiens. Chimeric Plasmodium falciparum. W09506737-A. 09-MAR-1995. 01-SEP-1994; G01900. 03-SEP-1994; GB-018350. 23-AUG-1994; GB-017021. (PREN/) PRENDERGAST K F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TNF-R-GBF 130 fusion protein.

TNF-R-GBF 130 fusion protein.

Hybrid peptide; malaria parasite; Plasmodium falciparum; fusion protein; red blood cell; cytokine receptor; glycophorin binding peptide 130; GBPH; glycophorin binding peptide homologue; glycophorin A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R70107
R70107;
                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 95-115452/15.

New hybrid peptide(s) for binding cytokine(s) - comprising a malaria parasite peptide capable of binding a red blood cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          06-APR-1990; 106624.
21-APR-1989; DE-913101.
21-UN-1989; DE-920282.
(BOEH ) BOEHRINGER INGELHEIMINT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hauptmann R, Himmler WPI; 90-321987/43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Prendergast KF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161 kqntvctchagfflrenecvscs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41 dsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhcl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KONTVCTCHAGFFLRENECVSCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
0 fusion prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            48.0%;
99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ≯
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Maurer-Fogy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 1124; DB 2;
Pred. No. 1.82e-99,
1; Mismatches (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Stratowa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 371;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
RESULT PRODUCT NAME OF THE PRODUCT NAME OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              និនិនិនិនិ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R42059;
                  The linker may comprise 5-100 amino acids selected from Gly, Asp, Ser, Thr and Ala. These linkers separate the individual moeities by such a distance that each component of the fusion protein is capable of folding into the secondary or tertiary structure required for its biological activity. These fusion proteins may be used in therapy, diagnosis and assays for conditions mediated by TNF or IL-1, particularly in conditions in which burn and IL-1 play a causitive role. They may be used to treat cachexia, rheumatoid arthritis, diabetes, multiple sclerosis, pulmonary fibrosis and silicosis, cerebral melaria, allograft and xenograft rejection in graft verses
                                                                                                                                                                                                                                                                                                                                                                                                                                            New fusion protein tumour necrosis factor and human interleukin-1 receptor - useful in therapy, diagnosis and assays of e.g. rheumatoid arthritis, diabetes, cerebral malaria, sepsis, etc. Disclosure; Page 57-59; 85pp; English.

The sequences given in R42058-59 repressent human tumour necrosis factor receptor (TNF-R) and the sequences in R42060-61 represent human interleukin-1 receptor (IL-IR). These sequences were used in the production of a fusion protein which conformed to one of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; tumour necrosis factor receptor; TNF-R; interleukin-l receptor; IL-R; fusion protein; linker; TNF; IL-1; cachexia; cerebral malaria; rheumatoid arthritis; diabetes; multiple sclerosis; septic shock; pulmonary fibrosis; silicosis; allograft; xenograft; rejection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          receptor molecule (eg. exhibited by Plasmodium vivax). These peptides bind to pref. glycophorin A, B and C, sialo glycoproteins, found on the surface of RBCs. The hybrid peptides are thus used to lower the levels of free cytokines in the circulation to reduce pathological
                                                                                                                                                                                                                                                                                                                                                          TNF-R-linker-TNF-R-linker-IL-lR
IL-lR-linker-TNF-R-linker-TNF-R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                 TNF-R-linker-TNF-R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-OCT-1993.
26-MAR-1993; U02938.
30-MAR-1992; US-860710.
(IMMV ) IMMUNEX CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W09319777-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        autoimmune dysfunction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; Q49932.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    graft verses host disease; sepsis; inflammation; allergy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lambda derived TNF-R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ambda-gt10-7ctnfbp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93-336592/42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    kqntvctchagfflrenecvscs 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              dsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhcl 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KONTYCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           451 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "Signal peptide"
41..455
/note= "Mature house."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protein; 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               48.0%;
99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1124;
Pred. No. 1.
1; Mismatc
                                                                                                                                                                                                                                                                                                                                                             ဝူ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 13;
1.82e-99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ín
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

. .

```
RESULT 12
ID R07087 standard; Protein;
AC R20787,
DT 11-MAY-1992 (first entry)
DE TNF-alpha binding protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT IN ESCULT FIRST CONTROL OF THE STATE 
                                                                                                                                                           ġ
                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16-JUL-1990; 058976.

18-JUL-1989; US-381080.

11-DEC-1989; US-450329.

07-FEB-1990; US-479661.

(SYNE-) SYNERGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and beta, useful as therapeutic agent.

Disclosure; Fig 21; 142pp; English.

The sequence comprises the entire 30 kD TNF inhibitor. The cl from which the sequence was deduced was isolated from a cDNA library prepd. from RNA form U937 cells treated with PMA/PHA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R10986;
13-MAY-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R10986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence 455 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 91-073847/11.
N-PSDB; Q10883.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tumour necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                See also R10984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          degenerative diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    library prepd.
The whole gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tumour necrosis factor inhibitor - for suppression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cleavage_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24-JAN-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30kD TNF inhibitor
                                                                                                                                                             143
                                                                                                                                                                                                        161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    101
                                                                                                                                                                                                                                                                                               101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83
                                                                                                                                                                                                                                                  83
                                                                                                                                                                                                                                                                                                                                          23
                                                                                                                                                                                                                                                                                                                                                                                      41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41
                                                                                                                                                                                                                                                                                                                                       kqntvctchagfflrenecvscs 183
                                                                                                                                                                                                                                                                          scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KONTVCTCHAGFFLRENECVSCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          kqntvctchagfflrenecvscs
                                                                                                                                                             KONTVCTCHAGFFLRENECVSCA
                                                                                                                                                                                                                                                  SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ole gene can be inserted into expression vectors for pr inhibitor for use in the treatment of inflammatory and rative diseases. The active protein is claimed (Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                      142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             455
                                                                                                                                                                                                                                                                                                                                                                                                                                 48.0%;
larity 99.3%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note="
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Protein; 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           48.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R11001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cleavage gives active
                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1124; DB 2;
Pred. No. 1.82e-99;
1; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1124; DB 8;
Pred. No. 1.82e-99;
                                                                                                                                                             165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of TNF-alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                    100
                                                                                                                                                                                                                                                                                                                                          82
                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
RESCONDENSES OF THE PROPERTY O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         useful in treating cachexia, sepsis and auto immune diseases e.g. rheumatoid arthritis
Disclosure; Fig 1; 25pp; English.
The amino acid sequence is that of tumour necrosis factor alpha binding protein which contains the extracellular domain of human TNF alpha receptor. It is soluble and can be used in the regulation of TNF-mediated responses by binding and sequestering the cytokine. It can therefore be used therapeutically to treat disorders such as
                                                                                                                                                                                                                                                                                                                                                                                                 R75084 standard;
R75084;
19-JAN-1996 (fir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (CHAR-) CHARING CROSS SUNLE. Feldman M, Gray P, Turner M, WPI; 92-043613/06.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  peptide
                                                                                                                                                                                                                                                                                                                     epidermal growth factor
                                                                                                                                                                                                                                                                                                                                                                              p55 TNF-R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New tumour necrosis factor alpha binding protein and polypeptide useful in treating cachexia, sepsis and auto immune diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tumour necrosis factor alpha; autoimmune diseases; cachectin; extracellular domain.
                                                        modified_site
                                                                                                         modified_site
                                                                                                                                                                modified_site
                                                                                                                                                                                                                   peptide
                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                             phorbol myristate acetate; PMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41 dsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhcl 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      therefore be used
hexia, sepsis and
                                                                                                                                                                                                                                                                                                                     tumour necrosis factor receptor; TNF-R; human;
ermal growth factor receptor; EGF-R; protease; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         kqntvctchagfflrenecvscs 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8cskcrkemgqve1ssctvdrdtvcgcrknqyrhywsenlfqcfncs1clngtvh1scqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            48.0%;
larity 99.3%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             145.
                                                        /note= "glycosylation site"
161..163
                                                                                                                                                             /note= "N terminus of 54..56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note- "potential N-glycosylation 151..153 /note- "potential N-glycosylation /note- "potential N-glycosylati
                                                                                                               145..147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30..199
                                                                                                                               /note= "glycosylation
                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           note- "signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      autoimmune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "extracellular domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "mature peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "transmembrane domain'
                             "glycosylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "potential N-glycosylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                       455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 1124; DB 4;
Pred. No. 1.82e-99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Brennan
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    diseases, specifically rheumatoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ч
                                                                                                                                  site"
                                                                                                                                                                                        soluble
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ,;
,
                                                                                                                                                                                     p55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                        ; murine; chimera;
inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
RESULT
ID RO
AC RO
DT 29
DE HI
KW 11
KW 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                               143
                                                                                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23
```

```
CC Expression of this receptor is regulated by shedding of the extracellular receptor fragment. The p55 TNF-R can be shed in response to different cureceptor fragment. The p55 TNF-R can be shed in response to different cureceptor fragment. The p55 TNF-R can be shed in response to different cureceptor fragments, e.g. phorbol myristate acetate (PMA), depending on cell type. The only region of the receptor whose structure affects the common fragments is the spacer region (see R75012) in the extracellular common fragments and links the Cys rich module to the transmembrane domain. The spacer region of the encoded protein was used to create the chimeras between human p55 TNF-R and murine ppidermal growth factor receptor (EGF-R) that are represented by R75007-11. This spacer region was subjected to deletion mutations (R75013-25) and substitutions (R75013-64-7). Of the spacer region, the most important residues are comportant of these. The shedding of the receptor is independent of the cale chain identity of these residues, with the exception of a limited dependence on the identity of Val 173. Mutations which alter the conformation of the protein adversely effect the shedding process. The mutations shown in R75013-47 were introduced in order to create an conformation of a protease that is capable of cleaving the soluble TNF-R conformation of a protease that is capable of cheaving the soluble TNF-R conformation of an enterior of these inhibitors can be seen in the cold for enhancing TNF function.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-OCT-1994; 075742.

12-OCT-1993; IL-107268.

(YEDA) YEDA RES & DEV C

Batkin M, Brakebusch C,

WPI; 95-194342/26.
                                                                                                                                   R07451;
Human Tumour Necrosis Factor-Receptor from lambdaTNF-R2 cDNA insert. Tumour necrosis factor binding protein; TNF-BP; TNF-receptor; infectious disease; parasitic disease; cachexis; autoimmune disease; shock; lambdaTNF-R2; raTNF-R8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New protease capable of cleaving soluble tumour necrosis (TNF) receptor - from cell-bound TNF- receptor, useful fantagonising deleterious effects of TNF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_difference
                                                                                                          29-JAN-1991 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Fig 1; 40pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New protease capable of cleaving (TNF) receptor - from cell-bound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       be used for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; Q90513
                                                                                                                                                                                                                                                                                                                                                                                                             101 scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe
                                                                                                                                                                                                                                                                                                                         161 kqntvctchagfflrenecvscs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41 dsvcpqgky1hpqnns1cctkchkgty1yndcpgpgqdtdcrecesgsftasenh1rhc1
                                                                                                                                                                                                                                                                          KONTYCTCHAGFFLRENECVSCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                    SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   142;
                                                                                                                                                               standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 enhancing TNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "essential for shedding reaction"
203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note=
201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "minor C terminus for soluble p55 TNF-R" 212..234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "major C terminus 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "peptide used in 198..210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note=
                                                                                                                                                            protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             48.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ဗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "spacer region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    English
                                                                                                                                                               455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       function.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Varfolomeev
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1124; DB 14; Pred. No. 1.82e-99;
                                                                                                                                                                                                                                                                                                                               183
                                                                                                                                                                                                                                                                          165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŗ
                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   creation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        for soluble p55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wallach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ,;
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of chimeras"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                    160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
PR SULP TRESULP RESULP 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA encoding TNF binding protein and TNF- receptor - used in tumour treatment and to understand mechanismsm to TNF action Sisclosure; Fig 91(1-2); 51pp; German.

CI LambdarNF-R2 (Q06284) was used to screen the HS913T cDNA library.

LiambdarNF-R2 encodes the complete human TNF-R2 and was used to construct a plasmid (pADTNF-R) expressing the product the same way as pADTNF-BP (see Q06282). The expressed proteins are useful prophylactically and therapeutically to control disorders which involve the damaging effects of TNF-alpha or -beta (e.g. infectious or parasitic diseases, shock, cachexia, autoimmune diseases, adult respiratory distress syndrome etc., or side effects of treatment with assaying TNF and in study of TNF-receptor interactions.

Consultation of the product of the study of TNF-receptor interactions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 48.0%;
Best Local Similarity 99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                              EP-417563-A.
20-MAR-1991.
31-AUG-1990;
12-SEP-1989;
08-MAR-1990;
20-APR-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24-OCT-1990.
06-APR-1990; 106624.
21-APR-1989; DE-913101.
21-JUN-1989; DE-920282.
(BOEH) DECHRINGER INCELHEIMINT.
                     (HOFF ) HOFFMANN-LA ROCHE AG.
Brockhaus M, Dembic Z, Gentz
Schlaeger EJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24-MAY-1991 (first entry)
Human 55kD TNF-binding protein.
Tumour Necrosis Factor; binding proteins; septic shock;
autoimmune glomerulonephritis; lymphokine; cytokine.
                                                                                                                                                                                                                                                                                       peptide
                                                                                                                                                                                                                                                                                                                                        region
                                                                                                                                                                                                                                                                                                                                                                                           modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                               modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Key
modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R11082 standard; Protein; 455 R11082;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB; Q06285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hauptmann R, Himmler A, Maurer-Fogy I, Stratowa
WPI; 90-321987/43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              kqntvctchagfflrenecvscs 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               dsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhc1 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     455 AA;
                                                                                                 116707.
CH-003319.
CH-000746.
CH-001347.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                            /label=
151
                                                                                                                                                                                                                                                                                                                                        /label= putative N-glycosylation site 212..230
                                                                                                                                                                                                                                                               'label-
                                                                                                                                                                                                                                                                                                             'label= transmembrane region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'label putative N-glycosylation site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                       label-
                                                                                                                                                                                                                                                            signal peptide
                                                                                                                                                                                                                                                                                                                                                                                                                 putative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     putative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 1124; DB 2;
Pred. No. 1.82e-99;
1; Mismatches (
                                                   'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                   Lesslauer W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-glycosylation site
                                                                                                                                                                                                                                                                                                                                                                                                                    N-glycosylation site
                                                      Lotscher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
Ş
                                                                                       밁
                                                                                                                  Ş
                                                                                                                                                  밁
                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                        Search completed: Wed
                                                                                                                                                                                                            B
                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 14
time: 99 secs
                                                                                                                                                                                                                                                                                                                                                                           Partial amino acid sequences were determined for the 55 and 75kb TNF-BPs (see R11072-R11081) and oligonucleotide primers were synthesised based on these partial sequences. The primers were used to produce a cDNA fragment for use as aprobe to screen a human placental cDNA bank constructed in lambda gtll. Positive clones were identified and sequenced. DNA constructs comprising the TNF-BP coding
                                                                                                                                                                                                                                                                                                                  sequence may also contain a fragment encoding a human Ig domain. Recombinant constructs are used to transform cells to confer improved TMF-binding properties.

See also Q10956.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       prodn.
Claim 1; Fig 1; 26pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; Q10955.
Insoluble tumou
                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     encoding them, useful
                                                          143
                                                                                       161
                                                                                                                                                  101
                                                                                                                   83
                                                                                                                                                                                23
                                                                                                                                                                                                            41
                                                                                                                                                                                                                                          Local Similarity 99.3%;
nes 142; Conservative
                                                                                                                  scskcrkemgqvelssctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                              dsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhcl 100
                                                                          kqntvctchagfflrenecvscs
                                                         KQNTVCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tumour necrosis factor binding proteins - them, useful in pharmaceutical prods. and :
                                                                                                                                                                                                                                                                                                        455
                                                                                                                                                                                                                                                                                                        Š
            May
                                                                                                                                                                                                                                                         48.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            German.
            σ
            08:57:56 1998
                                                                                                                                                                                                                                         Score 1124; DB 2; 1
Pred. No. 1.82e-99;
1; Mismatches 0;
                                                                                                                                                                                                                                                                     Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and DNA
                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                            0
```

#### THIS PAGE BLANK (USPTO)

••

**************************************	· 安全有关的安全的安全的安全的安全的安全的安全的安全的安全的安全的安全的安全的安全的安全的
非法语语 计计算 化二氯甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基	************

Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Wed May 6 08:55:24 1998; MasPar time 13.64 Seconds
821.959 Million cell updates/sec
Tabular output not generated.

Tabular output not generated.

Title: >US-08-804-166-4
Description: (1-307) from US08804166.pep
Perfect Score: 2341

Sequence: 1 SRTSLLLAFGLLCLPWLQEG......PSLPSPSRLPGPSDTPILPQ 307

Scoring table: PAM 150
Gap 11

Searched: 120446 seqs, 36531193 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database: pir56

pir56 \ 1:pir1 2:pir2 3:pir3 4:pir4 5:nr13d

Statistics: Mean 42.076; Variance 82.446; scale 0.510

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

22 23	20 21	19	18	17	16	15	14	13	12	11	10	9	8	7	σ	U	4	ω	2	-	NO.	Result
613 596	614	709	740	803	803	803	809	841	841	857	955	1024	1030	1030	1098	1105	1114	1118	1124	1124	Score	
	26.2 26.2	•	•		34.3	34.3						43.7	44.0	44.0	46.9	47.2	47.6	47.8	48.0	48.0	Match 1	Query
169 119	141 141	115	121	110	110	110	461	454	454	165	461	145	165	145	140	139	142	160	455	158	Length [	
21	2 1	-	N	σ	v	U	μ.	ы	N	Н	N	N	ب	N	ഗ	S	ហ	Ŋ	_	u	8	
KTHOB A61465	UTBOB 146949	UTHUB	I37994	1HRPB	1HCNB	1XULB	GQRTT1	GQMST1	I57826	KTBAB	JC4302	137231	KTHUB	I37412	1NCFA	1TNRR	1NCFB	1EXTA	GQHUT1	1EXTB	ID	
choriogonadotropin be lutropin beta chain -	lutropin beta chain p luteinizing hormone b	n beta ch			Human chorionic gonad	chorionic gonadotropi	tumor necrosis factor		tumor necrosis factor	choriogonadotropin be	tumor necrosis factor	beta-gonadotropin - h	choriogonadotropin be	ď	tumor necrosis factor		tumor necrosis factor	tumor necrosis factor	tumor necrosis factor	tumor necrosis factor	Description	
2.10e-99 6.93e-96	1.30e-99 1.30e-99	2.16e-119	2	4.02e-139	4.02e-139	4.02e-139	2.19e-140	3.90e-147	3.90e-147	1.63e-150	2.83e-171		3.16e-187	3.16e-187	9.90e-202		3.78e-205	5.28e-206	2.76e-207	2.76e-207	Pred. No.	

# ALIGNMENTS

68-70 143-145 9-11, 19-21 9-11, 19-21 133-136, 139-142 27-31, 41-44 73-76, 85-87 92-98, 101-106 113-117, 126-129 5-19	COMMENT Resolu COMMENT Detern COMMENT R-valu KEYWORDS	#authors #journal #title	#journal #title REFERENCE	REFERENCE TNO.  #authors Nai.  #journal J.  #title Cry.  REFERENCE TNO.  #authors Pod.	ORGANISM #note #note REFERENCE #authors #submission	RESULT 1 ENTRY TITLE PDB_TITLE
<pre>#region helix (right hand 3-10)\ #region helix (right hand 3-10)\ #region beta sheet\ #region beta sheet\</pre>	receptor-numan TWEDETA complex: implications for TWE receptor activation.  Resolution: 1.85 angstroms Determination: X-ray diffraction R-value: no refinement binding protein; cytokine; signalling protein	; Janes, W.; Gentz, R.; Scischer, H.; Lesslauer, W. soluble human 55 kd TNF	ar domain of	pDB:1EXT pDB:1EXT 26351 smith, J.H.; Devine, T.Q.; Brandhuber, B.J.; Sprang, Biol. Chem. (1995) 270:13303 stallographic evidence for dimerization of unliganded umor necrosis factor receptor. 26352	rmal_name Homo sapiens #common_name ressed in Escherichia coli, the connesidues 12 to 172 of the mature sequeceptor. residue 11 is mutated to make to system 560 system 580 Sprang, S.R. mitted to the Brookhaven Protein Damitted to the Brookhaven Protein Bamitted to the Brookhaven Bamitted to the Brookhaven Bamitted to the Brookhaven Protein Bamitted to the Brookhaven Bamitted to the Bamitted to the Brookhaven Bamitted to the Bamitted to the Bamitted Bamitted to the Bamitted B	1EXTB #type complete tumor necrosis factor receptor extracellular domain, chain B extracellular domain of the 55kda tumor necrosis factor receptor. crystallized at ph3.7 in p 21 21 21.

```
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CONTAINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-33
23-42
45-60
63-78
66-86
88-104
110-119
                                  #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                              #accession A38zus
##molecule_type DNA
1-4/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      129-140
143-156
*cross-references MUID:90235285
                                                                                                     #authors
                                                                                                                                                                                                                                        #accession
                                                                                                                                                                                                                                                                                                         #journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #authors
                                                                                                                                                                                                                                                      cross-references MUID:90235284
                                                                                                                                                                                                                                                                                                                                            authors
                                                                                                               ##CCLUSS recommended placenta
##experimental_source placenta
part of this sequence, including the amino end of the
##note
mature protein, confirmed by protein sequencing
                                                                                                                                                                              ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                  ##residues 1-455 ##label FUC
##cross-references GB:M75864; GB:M75865; GB:M75866; NID:g339748;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KONTVCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KQNTVCTCHAGFFLRENECVSCS 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                h 48.0%;
Similarity 99.3%;
   A34900
SChall, T.J.; Lewis, M.; Koller, K.J.; Lee, A.;
Wong, G.H.W.; Gatanaga, T.; Grangar, G.A.; Len
H.; Kohr, W.J.; Goeddel, D.V.
Cell (1990) 61:361-370
Molecular cloning and expression of a receptor f
tumor necrosis factor.
                                                                                                                                                                                                                                                                               M.; Tabuchi, H.; Lesslauer, W. Cell (1990) 61:351-359
Molecular cloning and expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fuchs, P.; Strehl, S.; Dworzak, M.; Himmler, A.; Ambros, P.F. Genomics (1992) 13:219-224
Structure of the human TNF receptor 1 (p60) gene (TNRF1) and localization to chromosome 12p13.
                                                                                                                                                                                                                                      A34899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        binding protein 1 (TNF blocking factor)
#formal_name Homo sapiens #common_name man
30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change
                                                                                                                                                                                                                                                                                                                                     Loetscher, H.; Pan, Y.C.E.; Lahm,
                                                                                                                                                                                                                                                                                                                                                          A34899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A38208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A38208; A34899; A34900; A36555; C36555; A38281; S12057; JT0758; A60231; A38258; A60594; A35010; JC2404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tumor necrosis factor receptor type 1 precursor - humanAlTERNATE_NAMES tumor necrosis factor alpha inhibitor; tumor necrosis factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #length 158 #molecular-weight 17827 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                    necrosis factor receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-Oct-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                        PID: 9339750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1124; DB 5;
Pred. No. 2.76e-207;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                     H.W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 158;
                                                                                                                                                                                                                                                                                      the human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                             receptor for human
                                                                                                                                                                                                                                                                                                                                     Gentz,
                                                                                                                                                                                                                                                                                    55
                                                                                                                                                                                                                                                                                                                                 R.; Brockhaus,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                              Rice,
                                                                                                                                                                                                                                                                                    kd tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                              R.; Raab,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                               REFERENCE
#authors
                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                 #journal
#title
                                                                                                            #journal
                                                                                                                                                                                                                #accession
                                                                                                                                             #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #accession
```

```
#title Tumor necrosis factor inhibitor: purification, NH-2-terminal amino acid sequence and evidence for anti-inflammatory and immunomodulatory activities.

#cross-references MUID:90292116
#accession A60231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #accession S1205/
##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #accession A38281
##molecule_type mRNA
##residues 1 455 ##label GRA
##cross-references GB:M37764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfizenmaier, K.; Lantz, M.; Olsson, I.; Hauptmann, R.; Stratowa, C.; Adolf, G.R.

#journal DNA Cell Biol. (1990) 9:705-715

Molecular cloning and expression of human and rat tumor necrosis factor receptor chain (p60) and its soluble derivative, tumor necrosis factor-binding protein.

#cross-references MUID:91090841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #journal Proc. Natl. Acad. Sci. U.S.A. (1990) 87:7380-7384
#title Cloning of human tumor necrosis factor (TNF) receptor cDNA
and expression of recombinant soluble TNF-binding protein.
#cross-references_MUID:91017509
                                                                                                                                                                                                                                                                 ##residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ##notecule_type protein
##residues 30-38;41-53,'X',55-79,'XX',82-94,'NK';'XX',100-104;
##residues 107-128;162-167,'X',169-201 ##label HI2

##note the purified protein, called tumor necrosis factor binding protein, is a soluble derivative of the receptor
                                                                                                                                                                                                                                                              ##molecule_type DNA
##residues 1-13 ##label KEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ##rote 10165 ##label NOP
##cross-references EMBL:X55313; NID:g37223; PID:g37224
##note parts of soluble TNF binding protein 1, including its
amino and carboxyl ends, were confirmed by protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ##residues 1-455 ##label HIM
##cross-references GB:M63121; NID:g339755; PID:g339756
**cession C36555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ##molecule_type mRNA
##residues 1-455 ##label SCH
##cross-references GB:M33294; NID:g339744; PID:g339745
                   ##molecule_type
                                                                                                                                                                                                                                                                                                                                       Kemper, O.; Wallach, D.
Gene (1993) 134:209-216
Cloning and partial characterization of
human p55 tumor necrosis factor (TNF)
                                                                                                                                                                         Eur. J. Immunol. (1990) 20:1167-1174
                                                                                                                                                                                                                                                  A60231
                                                                                                                                                                                                                                                                                                                        JT0758
                                                                                                                                                                                                                 Seckinger, P.; Vey, E.; Turcatti, G.; Wingfield, P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gray, P.W.; Barrett, K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A36555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Himmler, A.; Maurer-Fogy, I.;
                                                                                                                                                                                                                                                                                                                                                                                                                                             JT0758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A36555
protein
41-43,'X',45-53,'X',55-57 ##label
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the authors translated the codon TGG for residue 371 as Thr. AAG for residue 372 as Leu, and GAC for residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             427 as Asn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chantry, D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kroenke, M.;
Olsson, I.; H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Turner,
                                                                                                                                                                                                                                                                                                                                                                the promoter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scheurich,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Feldmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H.; Zwang,
                                                                                                                                                                                                                    Dayer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R P.
                                                                                                                                                                                                                                                                                                                                                                  for the
```

```
KEYWORDS
FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                               SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gatanaga, T.; Hwang, C.; Kohr, W.; Cappuccini, F.; Lucci II
J.A.; Jeffes, E.W.B.; Lentz, R.; Tomich, J.; Yamamoto,
R.S.; Granger, G.A.

#journal Proc. Natl. Acad. Sci. U.S.A. (1990) 87:8781-8784
Purification and characterization of an inhibitor (soluble tumor necrosis factor receptor) for tumor necrosis factor and lymphotoxin obtained from the serum ultrafiltrates of human cancer patients.

#cross-references MUID:91062364
#accession A38258
    Query Match
                                                                                                           44-82
84-126
127-167
168-196
212-234
235-455
                                                                                                                                                                                                                                                                                                                                                                                                                 ##cross-references GDB:125913; OMIM:191190
#map_position 12p13.2-12p13.2
#introns 13/3: 65/1; 108/1; 158/1; 184/2; 209/1; 247/1; 256/3; 353/1
#SIFICATION #superfamily tumor necrosis factor receptor type 1; NGF
receptor repeat homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #accession JC2404
##molecule_type protein
##residues 41-53,'X',55-144,'X',146-150,'X',152-186,'X',188-201
                                                                                                                                                                                                                                                                 30-211
41-201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #authors Engelmann, H.; Novick, D.; Wallach, D.

J. Biol. Chem. (1990) 265:1531-1536

#title Two tumor necrosis factor-binding proteins purified from human urine. Evidence for immunological cross-reactivity

with cell surface tumor necrosis factor receptors.

#cross-references MUID:90110215

#accession A35010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #accession
                                                                                        54,145,151
                                                                                                                                                                                                                                                                                                                                   22-455
                                                                                                                                                                                                                                                                                                                                                          1-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ##experimental_source urine
This protein is one of two
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ##molecule_type protein
#residues 41-43,'X',45-53,'V',55-57,'XK',60
##residues tal_source renal failure patient urine
##ROLE A35010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ##molecule_type protein
##residues 41-60 ##label GAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ##residues 41-45 ##label ENG
##experimental_source normal urine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ##molecule_type protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ##experimental_source cancer patient serum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (cachectin) and TNF-beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Olsson, I.; Lantz, M.; Nilsson, E.; Peetre, C.; Thysell, I Grubb, A.; Adolf, G.
Eur. J. Haematol. (1989) 42:270-275
Isolation and characterization of a tumor necrosis factor binding protein from urine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rajlhara, J.; Asada, A.; Kirihara, S.; Kato, K. Biosci. Biotechnol. Biochem. (1994) 58:2266-2268 Amino acid sequence of natural tumor necrosis factor alpha inhibitor purified from human urine.
                                                                                                                                                                                                                                                                                                                                                                                              duplication; glycoprotein; receptor; transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GDB: TNFR1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A60594
                                             #length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A60594
                                                                                                    *product tumor necrosis factor receptor type 1 *status predicted *label MAT\
#domain extracellular *status predicted *label EXT\
#domain NGF receptor repeat homology *label NG2\
#domain NGF receptor repeat homology *label NG2\
#domain NGF receptor repeat homology #label NG2\
#domain NGF receptor repeat homology #label NG3\
#domain NGF receptor repeat homology #label NG3\
#domain NGF receptor repeat homology #label NG3\
#domain NGF receptor repeat homology #label NG4\
#domain transmembrane #status predicted #label NG4\
#domain intracellular #status predicted #label NG4\
#domain intracellular #status predicted #label NG4\
                                                                                    #binding_site carbohydrate (Asn) (covalent) #status
                                                                                                                                                                                                                                                                                                                                                   #domain signal sequence #status predicted #label SIG\
                                               455
    48
    .08;
                                           #molecular-weight 50494 #checksum 153
  Score 1124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       known receptors for (lymphotoxin).
  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cappuccini, F.; Lucci III, Tomich, J.; Yamamoto,
Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                both INF-alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STO
                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PDB_TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #journal
#title
                    86-102
105-117
108-125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #authors
                                                                                                                                                                                                                                                                                                                                                   141-143
151-154
                                                                                                                                                                                                                                                                                                                                                                                                 89-99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              w
```

```
Best Local Similarity 99.3%; Matches 142; Conservative
                                                                                                                                                                                                                                           7-9,17-19
131-134,137-140
25-29,39-42
71-74,83-85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #cross-referen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #submission
                                                                                                                                                                                                                      0-96,99-104
                                                                                                                                                                                                11-115,124-127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101 SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KONTYCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KONTYCTCHAGFFLRENECVSCS 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                      R-value: no refinement binding protein; cytokine; signalling protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Resolution:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Determination: X-ray diffraction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Banner, D.W.; D'Arcy, A.; Janes, W.; Gentz, R.; H.J.; Broger, C.; Loetscher, H.; Lesslauer, W. Cell (1993) 73:431-445
Crystal structure of the soluble human 55 kd TNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tumor necrosis factor receptor extracellular domain, chain pextracellular domain of the 55kda tumor necrosis factor receptor. crystallized at ph3.7 in p 21 21 21.
#formal_name Homo sapiens #common_name man expressed in Escherichia coll, the construct contains expressed in Escherichia coll, the construct contains residues 12 to 172 of the mature sequence of the entire receptor, residue 11 is mutated to met as a result of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 K.; Naismith, J.H.; Sprang, S.R.
J. Mol. Biol. (1994) 239:332
Two crystal forms of the extracellular domain of type i tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Naismith, J.H.; Devine, T.Q.;
J. Biol. Chem. (1995) 270:1330
Crystallographic evidence for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A40737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rodseth, L.E.; Brandhuber, B.; Devine,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TN026249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ces PDB:1EXT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Naismith, J.H.; Sprang, S.R. submitted to the Brookhaven Protein Data Bank, July 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A65560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             receptor activation. on: 1.85 angstroms
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               necrosis factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    expression system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tumor necrosis factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               receptor-human TNFbeta complex: implications for TNF
                                                                                                                                                                                                                                        #region beta sheet\
#region beta sheet\
#region beta sheet\
#region beta sheet\
                                                                                                                                                                                                                                                                                                                                           #region
#disulfide_bonds
                              #disulfide_bonds\
                                                  #disulfide_bonds\
                                                                                                                           #disu
                                                                                                                                                                                                  #region
                                                                                                                                                                                                                      #region beta
                                                                         disulfide_bonds
                                                                                                  disulfide_bonds
                                                                                                                                                                    on beta sheet\
on beta sheet\
lfide_bonds\
                                                                                                                      fide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #type complete
                                                                                                                                                                                                                                                                                                                                        h helix (right )
h helix (right )
helix (right )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. No. 2.76e-207;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                        hand 3-10)\
hand 3-10)\
hand alpha)\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    dimerization of unliganded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Brandhuber, B.J.; Sprang, S.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gentz, R.; Schoenfeld
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             T.Q.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ECK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chain A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
COMMENT
KEYWORDS
FEATURE
2-16
17-30
20-39
42-57
63-83
63-85-101
104-116
1107-124
126-137
SUMMARY
                                                                                                                                                                                                                                                                                                                                                COMMENT
   Ş
                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ALTERNATE_NAMES ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 14
                                                                               Query Match
Best Local
                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                              #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           141-154
144-150
                                                                                                                                                                                                                                                                                                                                                                                                                                                             #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *cross-refere
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 QNTVCTCHAGFFLRENECVSCS 142
                                                             / Match 47.6%;
Local Similarity 99.3%;
nes 140; Conservative
   25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24
                1 VCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 SVCPOGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQQDTDCRECESGSFTASENHLRHCLS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEK 120
VCPQGKY IHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QNTVCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEK 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SYCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLS 83
                                                                                                                                                                                                                                                                                                                                              receptor activation.
Resolution: 2.25 angstroms
Determination: X-ray diffraction
                                                                                                                                                                                                                                                                                                                                R-value: no refinement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            47.8%;
Similarity 99.3%;
                                                                                                                                                                                                                                                                                                                                                                                          Crystal structure of the soluble human 55 kd TNF receptor-human TNFbeta complex: implications for
                                                                                                                                                                                                                                                                                                                                                                                                                           H.J.; Broger, C.; Lo.
Cell (1993) 73:431-445
                                                                                                                                                                                                                                                                                                                                                                                                                                      Banner, D.W.; D'Arcy, A.; Janes, W.; Gentz, R.; H.J.; Broger, C.; Loetscher, H.; Lesslauer, W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rodseth, L.E.; Brandhuber, B.; Devine, T.Q.; E
K.; Naismith, J.H.; Sprang, S.R.
J. Mol. Biol. (1994) 239:332
Two crystal forms of the extracellular domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #formal_name Homo sapiens #common_name man
expressed in Escherichia coli, residue ll is mutated to
as a result of the expression system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          stnfr1; type 1 receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #disulfide_bonds\
#disulfide_bonds
#length 160 #molecular-weight 18065 #checksum
                                                                                                                           #length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Naismith, J.F submitted to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tumor necrosis factor receptor 55 kd extracellular domain contains residues 12 172 of the mature receptor sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A40737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TN029041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ces PDB:1NCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A66195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1NCFB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     necrosis factor receptor.
                                                                                                                                      #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
                                                                                                                                                                                                                                                  #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
                                                                                                                           142
                                                                                                                                                                                                                                                                                                                 protein; cytokine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               J.H.; Sprang, S.R.
to the Brookhaven Protein Data
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *type complete
                                                                                                                        #molecular-weight 16046 #checksum 1225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 1118; DB 5; Le
Pred. No. 5.28e-206;
""" wismatches 0;
                                                          Score 1114; DB 5; 1
Pred. No. 3.78e-205;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                              signalling protein
                                                                                         Length 142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 160;
                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bank,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eck, M.J.; Hale,
                                                                                                                                                                                                                                                                                                                                                                                                                                         Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ဝှု
                                                                                                                                                                                                                                                                                                                                                                                            for
                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                October
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Schoenfeld,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    type i tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence,
                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              met
                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
COMMENT
COMMENT
KEYWORDS
FEATURE
1-15
16-29
19-38
                                                                                RESULT
ENTRY
                                                                                                                                           Ş
                                                                                                                                                                           밁
                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
ENTRY
 ALTERNATE_NAMES
                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                 41-56
59-74
62-82
84-100
103-115
106-123
125-136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *cross-referen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #authors
                                                                                                                                                                 121 TVCTCHAGFFLRENECVSC 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                           146 TVCTCHAGFFLRENECVSC 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          145
                                                                                                                                                                                                       86 KCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQN
                                                                                                                                                                                                                       61 KCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQN 120
                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        85
                                                                                               σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NTVCTCHAGFFLRENECVSCS 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NTVCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Crystallization and preliminary analysis thisbeta-55 kd this receptor complex. Resolution: 2.85 angstroms
Determination: X-ray diffraction
                                                                                                                                                                                                                                                                                                                                     139;
                                                                                                                                                                                                                                                                                                                                    h 47.2%;
Similarity 100.0%;
139; Conservative
tumor necrosis factor receptor 55 kd extracellular domain contains residues 12 172 of the mature receptor sequence. chain A - hu stnfr1; type i receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               H.J.; Broger, C.; Loetscher, H.; Lesslauer, W. Cell (1993) 73:431-445
Crystal Structure of the soluble human 55 kd TNF receptor-human TNFbeta complex: implications for
                                                                                1NCFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     D'arcy, A.; Banner, D.W.; Janes, W.; Winkler, F.K.;
Loetscher, H.; Schoenfeld, H.J.; Zulauf, M.; Gent
Lesslauer, W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Complex(lymphokineRECEPTOR)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Banner, D.W.; D'Arcy, A.; Janes, W.; Gentz, R.;
H.J.; Broger, C.; Letscher, H.; Lesslauer, W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                submitted to the
                                                                                                                                                                                                                                                                                                                                                                                                  #length 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TN034093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A40737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Banner, D.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A52442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              recombinant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tumor necrosis factor receptor type 1 (P55 extracellular #formal_name Homo sapiens #common_name man
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     receptor activation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            #disulfide_bonds/
#disulfide_bonds/
#disulfide_bonds/
#disulfide_bonds/
                                                                                                                                                                                                                                                                                                                                                                                             #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds
#disulfide_bonds
th 139 #molecular-weight 15746 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #disulfide_bonds\
#disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #disulfide_bonds\
                                                                             *type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             form expressed in Baculovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1993) 229:555
                                                                                                                                                                                                                                                                                                                                Score 1105; DB 5;
Pred. No. 3.17e-203;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Brookhaven Protein Data Bank, May 1994
                                                                                                                                                                                                                                                                                                                                                                 Length 139;
                                                                                                                                                                                                                                                                                                                                    Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of tnf-beta and
                                                                                                                                                                                                                                                                                                                                                                                                  5235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Schoenfeld
                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TNF
                                                                                                                                                                                                                                                                     85
                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                    0
```

0

Gaps

0

Chor

chain

```
ACCESSIONS
REFERENCE
#authors
#journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE 5-19
5-19
20-33
23-42
45-60
63-78
66-86
88-104
110-127
110-127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
GENETICS
                                                                                                                                                                                                                                                   TITLE
DATE
                                                                                                                                                                                                                                                                                                     RESULT
ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                      ş
                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
#authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #cross-references PDB:1NCF
REFERENCE TN029039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #authors
#submission
                                                                                          #authors Talmadge, K.; Vamvakopoulos, N.C.; Fiddes, J.C.
#journal Nature (1984) 307:37-40
#title Evolution of the genes for the beta subunits of human
chorionic gonadotropin and luteinizing hormone.
#cross-references MUID:84093590
#accession 137412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #authors
                                                                                                                                                                                                                                                                                                                                                                        143
                                               ##molecule_type DNA
##residner
                          ##cross-references EMBL:X00265; NID:g31719
                                            ##residues
                                                                                                                                                                                                                                                                                                                                                                                                          122
                                                                                                                                                                                                                                                                                                                                                                                                                                            83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KONTVCTCHAGFFLRENEC 140
                                                                                                                                                                                                                                                                                                                                                                        KONTVCTCHAGFFLRENEC 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     receptor activation.

Resolution: 2.25 angstroms

Determination: X-ray diffraction

R-value: no refinement

binding protein; cytokine; signalling protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               h 46.9%;
Similarity 100.0%;
139; Conservative
                                                                                                                                                                                              137412
137231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Banner, D.W.; D'Arcy, A.; Janes, W.; Gentz, R.;
H.J.; Broger, C.; Loetscher, H.; Lesslauer, W
Cell (1993) 73:431-445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rodseth, L.E.; Brandhuber, B.; Devine, T.Q.; E
K.; Naismith, J.H.; Sprang, S.R.
J. Mol. Biol. (1994) 239:332
Two crystal forms of the extracellular domain
                                                                                                                                                                                                                              beta-gonadotropin - human (fragment)ORGANISM 21-reb-1997 #sequence_revision 21-reb-1997 #1 09-May-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Crystal structure of the soluble human 55 kd TNF receptor-human TNFbeta complex: implications for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Naismith, J.H.; Sprang, S.R. submitted to the Brookhaven Protein Data Bank,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #formal_name Homo sapiens #common_name man
expressed in Escherichia coli, residue 11 is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A40737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A66195
                                                                                                                                                                                                                                                                                                     I37412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   necrosis factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        as a result of the expression system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
                                          1-145 ##label RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   140
                                                                                                                                                                                                                                                                                                   #type fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #molecular-weight 15889 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 1098; DB 5;
Pred. No. 9.90e-202;
0; Mismatches 0;
                                                                          GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                              #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eck,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mutated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ε
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of type i tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      October
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Schoenfeld
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   M.J.; Hale,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        to met
                                                                                                                                                                                                                                                               #formal_name
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #introns
CLASSIFICATION
                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                          #authors
#journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                   #authors Policastro, P.; Ovitt, C.E.; Hoshina, M.; Fukuoka,
Boothby, M.R.; Boine, I.
#journal J. Biol. Chem. (1983) 258:11492-11499
#title The beta subunit of human chorionic gonadotropin is
by multiple genes.
#cross-references_MUID:84008141
#cross-references_MUID:84008141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #accession
        #accession
                                                                                                                                              #title
                                                                                                                                                                                                                                                                                                 #accession
                                                                                                                                                                                                                                                                                                                                                                                                        #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #cross-references MUID:81012134
                                                                                                            #accession
                                                                                                                       #cross-references MUID:86195987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ##nolecule_type DNA
##residues 1-23,'M',25-136,'A',138-165 ##label PO2
##cross-references GB:K(3183; NID:g180442; PID:g180444
##note clone CG-beta-a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               127
                                     ##molecule_type DNA
##residues 1-5 ##label PO3
##cross-references GB:M13504; N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 169 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 228
                                                                                                                                                                                                                                                                               ##status
                                                                                                                                                                                                                                                                                                                   ##note
                                                                                                                                                                                                                                                                                                                                                                                      ##status
                                                                                            ##status
                                                                                                                                                                                                                                                                                                               ##molecule_type DNA
1-165 ##label POL
##cross-references GB:K03189; NID:g180450; PID:g180453
##pote clone CG-beta-e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SLPSPSRLPGPSDTPILPQ 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SLPSPSRLPGPSDTPILPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 h 44.0%;
Similarity 100.0%;
139; Conservative
                                                                                                                                       Policastro, P.F.; Daniels-McQueen, S.; Carle, J. Biol. Chem. (1986) 261:5907-5916
A map of the hCG beta-LH beta gene cluster.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fiddes, J.C.; Goodman, H.M.
Nature (1980) 286:684-687
The CDNA for the beta-subunit of human chorionic gonadotropin suggests evolution of a gene by readthrough into the 3'-untranslated region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-Mar-1998
A93230; I69972; I55224; I55250; I70007; I70008; A92303;
A92181; A92142; PC1016; A61097; B56873; A01502
                                                                                                                                                                                                                                                                                                 I55224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A93230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #superfamily #length 145
          I70007
                                                                                                            I55250
                                                                                                                                                                                                                                                                                                                                                                                                      169972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #formal_name Homo sapiens #common_name man
23-Oct-1981 #sequence_revision 23-Oct-1981 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        choriogonadotropin beta chain precursor - humanALTERNATE_NAMES
                          CG-beta-3 gene
                                                                                          preliminary; translated
                                                                                                                                                                                                                                                                               translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                     translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      pituitary glycoprotein
#checksum 2358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1030; DB 2; Pred. No. 3.16e-187; 0; Mismatches 0;
                                        NID:g180419;
                                                                                          from
                                                                                          GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hormone beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                        gonadotropin is encoded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                            ှ
:
```

Boime,

```
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
#authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                      #authors
                                                                                                                                                                                                                                                                                                                                                              #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #accession Ay21%2
##molecule_type protein
##residues 21-22,'Q',24-73,'ZL',76-140,142-157,'PB',160-165,'SLP'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #authors Morgan, F.J.; Birken, S.; Canfield, R.E.
#journal J. Biol. Chem. (1975) 250:5247-5258
#title The amino acid sequence of human chorionic
#cross-references MUID:75211304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    **PRENCE A92303
**Pauthors Birken, S.; Fetherston, J.; Canfield, R.; Boime, I.

**Journal J. Biol. Chem. (1981) 256:1816-1823

**Journal The amino acid sequences of the prepeptides contained in alpha and beta subunits of human choriogonadotropin.

**Eross-references MUID:81117268
                                                                              *accession
                                                                                                #cross-references MUID: 93229246
                                                                                                                                      #title
                                                                                                                                                                                                                                                                                                                         #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #authors Carlsen, R.B.; Bahl, O.P.; Swaminat
#journal J. Biol. Chem. (1973) 248:6810-6827
#cross-references MUID:74011267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                       #authors
##molecule_type protein
##molecule_type protein
26-28,'X',30-32,'X',34-42,'X',44-45,'X',47-48;75-76,'X'
##residues
78-91,'G',93-102 ##label KAR
                                                                                                                                                                                                            ##molecule_type protein
##residues 26-32,'X',34-49,'X',51-60;75-112 ##label BI2
##note this material from pregancy urine lacks stalic acid in
##note its carbohydrate and has been processed further from
the mature form into two chains linked by disulfide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ##molecule_type protein
##residues 1-20 ##label BIR
##note the identity of t
determined
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ##molecule_type protein
##residues 21-165 ##label SHI
##note article in Chinese with English abstract
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ##molecule_type protein
##residues 21-165 ##label MOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   **status preliminary; translated from GB/EMBL/DDBJ
**molecule_type DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #*residues 1-5 **label PO4

**cross-references GB:M13505; NID:g180429; PID:g463089

**note CG-beta-6 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ##status preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ##residues 1-5 ##label RE5
##cross-references GB:M13503; N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ##note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wang, Y.
Chinese Blochem. J. (1990) 6:558-562
The immunological characteristics of the enzymatic of human chorionic gonadotropin beta-subunit.
                                                                                                                             Kardana, A.; Bagshawe, K.D.; Coles, Br. J. Cancer (1993) 67:686-692 Characterisation of UGP and its relationships to the control of UGP and its relationships.
                                                                                                                                                                                                                                                                                                                                   Endocrinology (1988) 123:572-583
Structure of the human chorionic gonadotropin beta-subunit fragment from pregnancy urine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                I70008
                                                                                                                                                                                                                                                                                                                                                                                                              Birken, S.; Armstrong, E.G.; Kolks, M.A.G.; Cole, I Agosto, G.M.; Krichevsky, A.; Vaitukaitis, J.L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PC1016
Shi, Z.P.; Du, G.G.; Li, W.X.; Liu, X.J.; Li,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A92142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A92181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A92303
                                                                                                                                                                                                                                                                                                                           A61097
                                                                                                                                                                                                                                                                                                                                                                                                                                                        A61097
                                                                                                                   tragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CG-beta-7 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NID:g180432; PID:g463090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the residue at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Swaminathan,
                                                                                                                                its relationship
                                                                                                                                                                     B.; Read,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gonadotropin.
                                                                                                                                  with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19
                                                                                                                                                                       D.; Taylor, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S.Z.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            could not
                                                                                                                                                                                                                                                                                                                                                                                                                                   ۲
                                                                                                                                                                                                                                                                                                                                                                                                                Canfield,
                                                                                                                                                                                                                                                                                                                                                                                                                                   .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      χu,
                                                                                                                                                                                                                                              from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            þ
                                                                                                                                                                                                                                          ACCESSIONS
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE
1-20
                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                      GENETICS
                                                                                                                                                                                                                                                                                                                                                          ENTRY
                                                                                                                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #journal
#title
                                                                                                             #accession
##status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   141,147,152,158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       138,150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #map_position #introns
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #contents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        229
                                                                         ##residues
                                                                                                                                                                                                                                                                                                                                                                                                                               289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             87
                                                                                                                                                                                                                                                                                                                                                                           ø
```

```
29-77,43-92,46-130,
54-108,58-110,
113-120 #
33,50 #
                                                                                                                                      #authors Talmadge, K.; Vamvakopoulos, N.C.; Fiddes, J.C.
#journal Nature (1984) 307:37-40
#title Evolution of the genes for the beta subunits of human chorionic gonadotropin and luteinizing hormone.
#cross-references MUID:84093590
#accession 137231
#introns
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ##cross-references GDB:119055;
p_position 19q13.3-19q13.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       169 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 228
                                                                                         ##molecule_type DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ##experimental_source urine
                                            ##cross-references EMBL:X00266; NID:g29907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match 44.0%;
Local Similarity 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIPSPSRIPGPSDTPILPQ 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SLPSPSRLPGPSDTPILPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          predicted\
predicted\
status
binding_site carbohydrate (Ser) (covalent) *status
experimental
experimental
*length 165 *molecular-weight 17700
                                                                                                                                                                                                                                                                                      beta-gonadotropin - human (fragment)ORGANISM
21-Feb-1997 *sequence_revision 21-Feb-1997 *
09-May-1997
137231
137231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (or pseudogenes)
#superfamily pituitary glycoprotein hormone beta chain
glycoprotein; hormone; pituitary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5/3; 61/3 the chorlogonadotropin beta chain locus contains six genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GDB:CGB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nature (1994) 369:455-461
Crystal structure of human chorionic gonadotropin.
annotation, X-ray crystallography, 3.0 angstroms; correction
of disulfide bonds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lapthorn, A.J.; Harris, D.C.; Littlejohn, A.; J.W.; Canfield, R.E.; Machin, K.J.; Morgan,
                                                                                                                                                                                                                                                                                                                                                                                                                                    I37231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                   1-145 ##label RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #domain signal sequence #status experimental #label
#product choriogonadotropin beta chain #status
experimental #label MAT\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence modified after extraction from this material was designated urinary gor
                                                                                                               preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #disulfide_bonds #status experimental\
#binding_site_carbohydrate (Asn) (cova
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                peptide (peak
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            experimental\
                                                                                                                                                                                                                                                                                                                                                                                                                                 #type fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 1030; DB 1;
Pred. No. 3.16e-187;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OMIM: 118860
                                                                                                                  from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Asn) (covalent) #status
                                                                                                                    GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 165;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gonadotrophin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI backbone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lustbader,
F.J.; Isaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                  *formal_name
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIG/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
ACCESSIONS
REFERENCE
#authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
FEATURE
                                            δõ
                                                                                    밁
                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION SUMMARY
                    밁
                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENETICS
                                                                                                                                                                                                                                                   SUMMARY
                                                                                                                                                                                                 Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 43.78;
Best Local Similarity 99.38;
                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                 44-82
211-231
361-447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #journal
#title
                                                                                                                                                                                                                                                                                    54,145,151
                                                                                                                                                                                                                                                                                                                                                                                44-194
                                                                                                                                                                                                                                                                                                                                                                                                                   30-461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ##residues 1-461 ##label SUT
##cross-references GB:U19994; NID:g1141752; PID:g1141753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      289
                  161 KQDTICNCHSGFFLRDKECVSC 182
                                                                                    101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67
                                                   83
                                                                                                                    23
                                                                                                                                                   41
                                                                                                                                                                                                 Match 40.8%;
Local Similarity 80.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10
                                                                                                                                ESLCPQGKYSHPQNRSICCTKCHKGTYLHNDCLGPGLDTDCRECDNGTFTASENHLTQCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SLPSPSRLPGPSDTPILPQ 145
                                                                                                                 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SLPSPSRLPGPSDTPILPQ 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQASSSSKAPPP 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 228
                                                                                  SCSKCRSEMSQVEISPCTVDRDTVCGCRKNQYRKYWSETLFQCLNCSLCPNGTVQLPCLE 160
                                                 138;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Suter, B.; Pauli, U.
Gene (1995) 163:263-266
Cloning of the cDNA encoding the
factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #superfamily pituitary glycoprotein hormone beta chain
#length 145 #checksum 2349
                                                                                                                                                                                                                                                                                                                                                                                                                                                             glycoprotein; kidney; receptor; transmembrane protein; tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #superfamily tumor necrosis factor receptor type 1;
receptor repeat homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JC4302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tumor necrosis factor receptor p55 - pigORGANISM
29-Nov-1995 #sequence_revision 08-Feb-1996 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JC4302; PC4093
                                                                                                                                                                                                                                                   #length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JC4302
                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12-Dec-1997
                                                                                                                                                                                                                                                                              #binding_site carbohydrate (Asn)
                                                                                                                                                                                                                                                                                                             #domain NGF receptor repeat homology #label NG1\
#domain transmembrane #status predicted #label TI
#domain signal transduction #status predicted #label TI
                                                                                                                                                                                                                                                                                                                                                                               #domain extracellular cysteine rich #status predicted
                                                                                                                                                                                                                                                                                                                                                                                              #domain signal sequence #status predicted #label SIG\
#product tumor necrosis factor receptor p55 #status
predicted #label MAT\
                                                                                                                                                                                                                                                                                                 SIT/
                                                                                                                                                                                                                                                 predicted
1 461 #mo
                                                                                                                                                                                                                                                                                                                                                                 #label EXT\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #type complete
                                                                                                                                                                                                                                                 #molecular-weight 50696 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1024; DB 2; Pred. No. 6.00e-186; 0; Mismatches 1;
                                                                                                                                                                              Score 955; DB 2; Leg
Pred. No. 2.83e-171;
16; Mismatches 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  porcine
                                                                                                                                                                                                               Length 461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                (covalent) #status
                                                                                                                                                                                                                                                                                                               predicted #label
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  p55 tumor necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                  0
                                                                                                                                                                                                                                                 8079
                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #formal_name
                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
FEATURE
1-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSIONS
REFERENCE
                                                                                                                                                                                                                                TITLE
DATE
                                                                                                                                                                                                                                                                                RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
ENTRY
                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                              ACCESSIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  113-120
33,50
                                                            #journal Mol. Immunol. (1993) 30:165-176
#title Genomic organization and promoter func
tumor necrosis factor receptor beta
#cross-references MUID:93156721
#accession 157826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #authors Crawford, R.J.; Tregear, G.W.; Nial #journal Gene (1986) 46:161-169
#title The nucleotide sequences of baboon beta-subunit genes have diverged #cross-references MUID:87106851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-77,43-92,46-130,
54-108,58-110,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  140,147,152
                                                                                                                                                                 #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ##residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     143 KONTYCTCHAGFFLRENECVSC
                                                                                                                                                                                                                                                                                                                                                                                                                 229
                  ##residues
                              ##molecule_type DNA
                                                                                                                                                                                                                                                                                                                                                289 SLPSPSRLPGPSDTPILPQ 307
##cross-references GB:M76656; NID:g202100; PID:g202102
                                                   ##status
                                                                                                                                                                                                                                                                                                                                                                                                                                              87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Match 36.6%;
Local Similarity 81.3%;
                                                                                                                                                                                                                                                                                                12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11
                                                                                                                                                                                                                                                                                                                                                                               SPPSPSRLLEPAGTPFLPQ 165
                                                                                                                                                                                                                                                                                                                                                                                                             IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 288
                                                                                                                                                                                                                                                                                                                                                                                                                             IRLPGCPPGVDPMVSVPVALSCRCALCRRSTSDCGGPKDHPLTCDDPNLQASSSSKDPPP 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              There are at least five copies of CG-related genes and at let of these are expressed in the baboon placenta.

TION #superfamily pituitary glycoprotein hormone beta chain glycoprotein; hormone; placenta; pregnancy maintenance
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   choriogonadotropin beta chain precursor - olive baboonORGANISM
#common_name olive baboon
31-Mar-1988 #sequence_revision 31-Mar-1988 #text_change
                                                                                                                                                                                                                              tumor necrosis factor receptor - mouseORGANISM
02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change
                                                                                                                                                                                                                                                                                I57826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A25808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A25808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A25808
                                                                                                                                                             Rothe, J.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                              Steinmetz, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .-Mar-1988 #sequence_revision 31-Mar-1988 #text_change
                                                                                                                                                                                                               23-May-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #disulfide_bonds #status predicted\
#binding_site carbohydrate (Asn) (covalent) #status
predicted\
#binding_site carbohydrate (Ser) (covalent) #status
predicted

predicted

th 165 #molecular-weight 17592 #checksum 4960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1-165 ##label CRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1-454 ##label RES
                                                preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #domain signal sequence #status predicted #label SIG\
                                                                                                                                                                                                                                                                              #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #type complete
                                                                                                                                                               Bluethmann,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 857; DB 1;
Pred. No. 1.63e-150
14; Mismatches 1:
                                                                                                                                                               H . ;
                                                                                                                                                               Gentz,
                                                from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Niall,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12;
                                                GB/EMBL/DDBJ
                                                                                                               function of the murine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  from the human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 165;
                                                                                                                                                               R.; Lesslauer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     H.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gonadotropin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                 Σ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   least two
```

0

#formal\_name

```
ACCESSIONS
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                     #authors
#journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                             #authors Goodwin, R.G.; Anderson, D.; Jerzy, R.; Davis, T.; Brannar
C.I.; Copeland, N.G.; Jenkins, N.A.; Smith, C.A.
#journal Mol. Cell. Biol. (1991) 11:3020-3026
#title Molecular cloning and expression of the type 1 and type 2
#cross-references murine receptors for tumor necrosis factor.
#cross-references MuID:91246168
#accession B40254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #authors Lewis, M.; Tartaglia, L.A.; Lee, A.; Bennett, G.L.; Rice, G.C.; Wong, G.H.W.; Chen, E.Y.; Goeddel, D.V.
#journal Proc. Natl. Acad. Sci. U.S.A. (1991) 88:2830-2834
#title Cloning and expression of cDNAs for two distinct murine tumor necrosis factor receptors demonstrate one receptor is specifes specific.
#cross-references_MUID:91187885
  *cross-references
                                                                                                                                                                                             #accession
                                                                                                                                                                                                          *cross-references MUID: 91285014
                                                                                                                                                                                                                                                                             #journal
                                                                                                                                                                                                                                                                                                                       *authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #introns
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       †gene
                                                                                                                                                                                                                                                                                                                                                        ##molecule_type mRNA
#*residues 1-454 ##label GO2
##cross-references GB:M60468; NID:g199825; PID:g199826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101
                                                                                                                   ##residues 1-454 ##label BAR
##cross-references EMBL:X59238; NID:g53578; PID:g53579
                                                                                                                                                                ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ##cross-references GB:M60468; NID:g199825; PID:g199826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41 DSLCPQGKYVHSKNNSICCTKCHKGTYLVSDCPSPGRDTVCRECEKGTFTASQNYLRQCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TQNTVCNCHAGFFLRESECVPCS 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KONTVCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SCKTCRKEMSQVEISPCQADKDTVCGCKENQFQRYLSETHFQCVDCSPCFNGTVTIPCKE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SCSKCRKEMGQVEISSCTYDRDTYCGCRKNQYRHYWSENLFQCFNCSLCLNGTYHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        h 35.9%;
Similarity 70.6%;
101; Conservative
                                                                                                                                                                                                                          S16677

Barrett, K.; Taylor-Fishwick, D.A.; Cope, A.P.; K.

A.M.; Gray, P.W.; Feldmann, M.; Foxwell, B.M.J.

Eur. J. Immunol. (1991) 21:1649-1656

Cloning, expression and cross-linking analysis of p55 tumor necrosis factor receptor.
                               Rothe, J.G.; Brockhaus, M.; Gentz, R.; Lesslauer, W. Immunogenetics (1991) 34:338-340
Molecular cioning and expression of the mouse Inf receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TNFR-2
13/3; 65/1; 108/1; 158/1; 184/2; 210/1; 248/1; 257/3; #superfamily tumor necrosis factor receptor type 1; NC receptor repeat homology
                                                                                                                                                                                             S16677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A38634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tumor necrosis factor receptor type 1 precursor - mouseALTERNATE_NAMES
#formal_name Mus musculus #common_name house mouse
30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change
05-Sep-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cytokine receptor
#length 454 #molecular-weight 50030 #checksum 4267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A40254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A38634; B40254; S16677; S19021; I54532
MUID: 92039815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 841; DB 2; Length 454; Pred. No. 3.90e-147; 23; Mismatches 19; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     T.; Brannan
                                                                                                                                                                                                                                                    of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                  Kissonerghis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          353/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
```

```
ACCESSIONS
REFERENCE
#authors
                                                                                                                                                                                                                                                                                                                                                       ORGANISM
DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE
1-29
                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                           #title Molecular cloning and expression of human and rat tumor necrosis factor receptor chain (p60) and its soluble derivative, tumor necrosis factor receptor binding protein.

#accession R36555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 35.9%;
Best Local Similarity 70.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 44-82
44-126
127-167
168-204
213-235
236-454
54,151,202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #journal Immunogenetics (1994) 39:450-451
#title Nucleotide sequence of the TNF type
endothelloma cell line.
#cross-references MUID:94245292
#accession I54532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101 SCKTCRKEMSQVEISPCQADKDTVCGCKENQFQRYLSETHFQCVDCSPCFNGTVTIPCKE 160
         ##residues 1-461 ##label
##cross-references GB:M63122;
                                                 ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      143 KONTYCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                161 TONTYCNCHAGFFLRESECVPCS 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ##residues 1-454 ##label RES
##cross-references GB:L126349; NID:g430732; PID:g430733
This protein is one of two distantly related receptors for both
TNF-alpha (cachectin) and TNF-beta (lymphotoxin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ##cross-references EMBL:X57796; NID:g54848; PID:g54849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ##residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ##status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41 DSICPQGKYVHSKNNSICCTKCHKGTYLVSDCPSPGRDTVCRECEKGTFTASQNYLRQCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101;
                                                                                                                                                                                                                                                                                                                                              tumor necrosis factor receptor type 1 precursor - ratCONTAINS #formal_name Rattus norvegicus #common_name Norway rat 30-Jun-1992 #sequence_revision 07-Oct-1994 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         duplication;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #superfamily tumor necrosis factor receptor type 1; NGF
   receptor repeat homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S19021
                                                                                                                                                                                                                                                                                   A36555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                      .-un-1992 #sequence_revision
05-sep-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #domain extracellular #status predicted #label EXT\
#domain NGF receptor repeat homology #label NG1\
#domain NGF receptor repeat homology #label NG2\
#domain NGF receptor repeat homology #label NG3\
#domain NGF receptor repeat homology #label NG4\
#domain NGF receptor repeat homology #label NG4\
#domain transmembrane #status predicted #label NEM\
#domain intracellular #status predicted #label INT\
#binding_site carbohydrate (Asn) (covalent) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1-454 ##label ROT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #Droduct tumor necrosis factor receptor type 1 #statu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             predicted #label MAT\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       454 #molecular-weight 50129 #checksum 4839
                                                                                                                                                                                                                                                                                                                                                                                                                                            #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 841; DB 1; Length 454;
Pred. No. 3.90e-147;
23; Mismatches 19; Indels
HIM
NID:g207361; PID:g207362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         receptor; transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 I receptor from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #Status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
FEATURE
- 97-101,26-39,9-17
54-59,86-91
61-67,78-84
                                                                                                                                               COMMENT
COMMENT
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE
1-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 34.6%; Score 809; DB 1; Length 461; Best Local Similarity 68.5%; Pred. No. 2.19e-140; Matches 98; Conservative 21; Mismatches 24; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               44-82
84-126
127-167
168-204
212-234
235-461
54,151,201
                                                                                                                                                                                                                                            #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                               #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-211
30-201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #submission submitted to #cross-references PDB:1XUL
                                                                                                                                                                                                                                                                                                               #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161 KONTYCNCHAGFFLSGNECTPCS 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101 SCKTCRKEMFQVEISPCKADMDTVCGCKKNQFQRVLSETHFQCVDCSPCFNGTVTIPCKE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41 DNLCPQGKYAHPKNNSICCTKCHKGTYLVSDCPSPGQETVCEVCDKGTFTASQNHYRQCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KQNTVCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This protein is one of two known receptors for both TNF-alpha (cachectin) and TNF-beta (lymphotoxin).

TION #superfamily tumor necrosis factor receptor type 1; NGF receptor repeat homology
                                                                                                                    Structure (London) (1994) 2:545
Structure of human chorionic gonadotropin at 2.6 a resolution from mad analysis of the selenomethionyl protein.

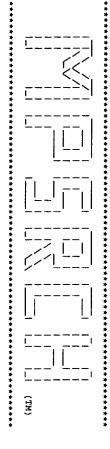
Resolution: not applicable Determination: theoretical model compelex; 91/coprotein hormone receptor glycoprotein; hormone; phosphorylation; receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jiang, X.; Dreano, M.; Buckler, D.R.; Cheng, S.; Ythier, A.; Wu, H.; Hendrickson, W.A.; El Tayar, N. submitted to the Brookhaven Protein Data Bank, December 1996
                                                                                                                                                                                                                                                                                                                                                         Jiang, X.; Dreano, M.; Buckler, D.R.; Cheng, S.; Ythier, Wu, H.; Hendrickson, W.A.; El Tayar, N.
Structure (London) (1996) 3:1341
Structural predictions for the ligand-binding region of glycoprotein hormone receptors and the nature of hormone-receptor interactions structure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              chorionic gonadotropin, chain B - humanPDB_TITLE
   receptor complexed with human chorionic gonadotropin
   #formal_name Homo sapiens #common_name man
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A66957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1XULB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #length 461 #molecular-weight 50969 #checksum 1617
                                                                                                                                                                                                                                                                                                                                        TN032626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IN032625
                                                                                                                                                                                                                                                                                      1, H.; Lustbader, J.W.; Liu, Y.; Canfield, R.E.; Hendrickson, W.A.
#region beta sheet\
#region beta sheet\
#region beta sheet\
#disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #domain extracellular *status predicted *label EXT\
*product tumor necrosis factor binding protein *status
predicted *label TBP\
*domain NGF receptor repeat homology *label NG1\
*domain NGF receptor repeat homology *label NG3\
*domain NGF receptor repeat homology *label NG3\
*domain NGF receptor repeat homology *label NG3\
*domain NGF receptor repeat homology *label NG4\
*domain transmembrane *status predicted *label NEM\
*domain intracellular *status predicted *label INT\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #domain signal sequence #status predicted #label SIG\
#product tumor necrosis factor receptor type 1 #status
    predicted #label MAT\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #binding_site carbohydrate (Asn) (covalent) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                glycoprotein; receptor; transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S.; Ythier,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    theoretical mod
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A . .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
밁
                                    Š
                                                       밁
                                                                                                              SUMMARY
                                                                                  Query Match
Best Local :
                                                                         Matches
                                                                                                                    25-109
33-87
37-89
92-99
169
                                                                                  y Match 34.3%;
Local Similarity 100.0%;
                                  105;
                                                                                                             #length 110 #molecular-weight 11906 #checksum
                                                                         Conservative
                                                                                                                     #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds
                                                                                  Score 803; DB 5; L
Pred. No. 4.02e-139;
                                                                         0; Mismatches
                                                                                         Length 110
                                                                         Indels
                                                                        0
                                                                                                              6414
```

0

Search completed: Wed May 6 08:55:58 1998 Job time : 34 secs.

THIS PAGE BLANK (USPTO)



Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

Run on: MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm Wed May 6 08:53:11 1998; MasPar time 9.09 Seconds 846.789 Million cell updates/sec

Tabular output not generated.

Description: Perfect Score: Sequence: >US-08-804-166-4 (1-307) from US08804166.pep 2341

1 SRTSLLLAFGLLCLPWLQEG.....PSLPSPSRLPGPSDTPILPQ 307

Searched: 69112 segs, 25083644 residues

Scoring table:

PAM 150 Gap 11

Post-processing: Minimum Match 0% Listing first 45 summaries

Database: swiss-prot35 1:swiss1

Statistics: Mean 43.895; Variance 73.304; scale 0.599

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Result
1124 1030 953 841 841 867 740 740 613 613 613 595 597 587 587 587 426 427 427	Score
44.8 44.8 44.0 34.6 44.0 34.6 46.0 34.6 56.0 34.6 56.0 34.6 56.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 3	Query Match I
455 465 165 165 461 164 164 164 164 164 164 164 164 164	Length DB
TNR1_HUMAN CGHB_PIG TNR1_PIG CGHB_PAPAN TNR1_MOUSE TNR1_RAT TNR1_RAT LSHB_HUMAN CGHB_CALJA LSHB_PIG LSHB_PIG LSHB_PIG LSHB_PIG LSHB_PIG LSHB_PIG LSHB_PIG LSHB_PIG LSHB_CANFA LSHB_PIG LSHB_CANFA LSHB_PICANFA LSHB_PICANFA LSHB_PICANFA LSHB_PICANFA LSHB_CANFA LSHB_MOUSE GTHB_CTEID GTHB_CTAGA	Ħ
TUMOR NECROSIS FACTOR CHORIOGONADOTROPIN BET TUMOR NECROSIS FACTOR CHORIOGONADOTROPIN BET TUMOR NECROSIS FACTOR TUMOR NECROSIS FACTOR TUMOR NECROSIS FACTOR LUTROPIN BETA CHAIN PR LUTROPIN JETA CHAIN PR LUTROPIN BETA CHAIN PR GONADOTROPIN BETA CHAI	Description
2.90e-242 4.39e-219 4.29e-210 8.42e-176 7.59e-177 5.55e-147 5.55e-147 2.18e-139 2.94e-116 5.13e-116 5.13e-113 2.36e-113 2.36e-113 3.82e-112 3.82e-112 3.82e-112 3.82e-119 5.71e-99 6.71e-99 6.71e-72 1.36e-71 5.02e-69 7.39e-68	Pred. No.

22222222222222222222222222222222222222	22 25
403 3403 371 371 357 357 357 357 357 357 357 357 357 357	411 407
17. 17. 17. 17. 17. 17. 17. 17. 17. 17.	17.6 17.4
112 140 142 142 142 159 159 159 138 138 138 138 138 138 138 138 138 138	142 113
	1
LSHB_RANCA GTH2_ANCAN GTHB_ONCTS GTH2_CORAU LSHB_STRCA GTH2_THOOB LSHB_COTJA LSHB_MELGA TSHB_MOUSE GTH2_FUNHE TSHB_PIG TSHB_BOVIN TSHB_BOVIN TSHB_HOMAN FSHB_HOMS FSHB_HOMS FSHB_HOMS FSHB_HOMS FSHB_HOMS	GTH2_ONCMA
BETA - CHAI BETA - BETA - BETA - CHAI BETA - CHAI BETA - CHAI BETA - CBETA - C	GONADOTROPIN BETA-II C
	7.39e-68 6.34e-67

# ALIGNMENTS

```
DOMAIN
REPEAT
REPEAT
REPEAT
REPEAT
REPEAT
DOMAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                 SIGNAL
CHAIN
CHAIN
DOMAIN
TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                       RECRUITS CASPASE-8 TO THE ACTIVATED RECEPTOR MOLECULE FADD AGGREGATE CALLED THE DEATH-INUCING SIGNALING COMPLEX (DISC) PERFORMS CASPASE-8 PROTECLYTIC ACTIVATION WHICH INITIATES THE SUBSEQUENT CASCADE OF CASPASES (ASPARTATE-SPECIFIC CYSTEINE PROTECLYSTIC ACTIVATION WHICH INITIATES THE SUBSEQUENT CASCADE OF CASPASES (ASPARTATE-SPECIFIC CYSTEINE PROTECLES) MEDIATING APOPTOSIS.

-1- SUBURIT: THE BINDING TO THE EXTRACELLULAR DOMAIN OF TNFIL LEADS TO HOMOTRIMERIZATION. ONCE AGGREGATED THE RECEPTORS DEATH DOMAINS PROVIDE A NOVEL MOLECULAR INTERFACE THAT INTERACTS SPECIFICALLY WITH THE DEATH DOMAIN OF TRADD. VARIOUS TRADD. INTERACTING PROTIENS SUCH AS TRAFS, RIP AND POSSIBLY FADD, ARE RECRUITED TO THER COMPLEX BY THEIR ASSOCIATION WITH TRADD, THIS COMPLEX ACTIVATES AT LEAST TWO DISTINCT SIGNALING CASCADES, APOPTOSIS AND NF-KARPA B SIGNALING.

-1- SUBSCELULAR LOCATION: TYPE I MEMBRANE PROTEIN.

-1- SIMILARITY: CONTAINS A LA-NGER/TNER-TYPE CYSTEINE-RICH REGION.
                                                                                                                                                                                                       PROSITE: PS00652; TNFR_NGFR_1; 3.

PROSITE: PS50050; TNFR_NGFR_2; 3.

PROSITE: PS50017; DEATH_DOMAIN; 1.

RECEPTOR; TRANSMEMBRANE; GLYCOPROTEIN; REPEAT;
                                                                                                                                                                                                                                                       EMBL;
PIR; P
PIR; S
PIR; S
PDB; 1
PDB; 1
PDB; 1
PDB; 1
                                                                                                                                                                                                                                                                                                                                                         EMBL;
EMBL;
EMBL;
EMBL;
EMBL;
EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            X-RAY CRYSTALLOGRAPHY (2.85 ANGSTROMS) OF 30 MEDLINE; 93258809.

BANNER D.W., D'ARCY A., JANES W., GENTZ R., BROGER C., LOETSCHER H., LESSLAUER W.; CELL 73:431-445(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENOMICS
[7]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 41-45
MEDLINE; 90110215
ENGELMANN H., NOV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAISHITH J.H., DEVINE T.Q.,
NAISHITH J.H., DEVINE T.Q.,
STRUCTURE 4.1251-1262(1996)
-1- FUNCTION: RECEPTOR FOR J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         X-RAY CRYSTALLOGRAPHY (1.85 ANGSTROMS) OF 41-202
                                                                                                                                                                                                                                                                                                     L; X55313; G37224; -...
L; X55313; G339754; -...
L; M58286; G339756; -...
L; M63121; G339750; J01;
L; M75866; G339750; J01;
L; M75866; G339750; J01;
L; M75865; G339750; J01;
L; M75865; G339760; -...
B; A3689; G579600; -...
R; A3489; G579600; -...
R; A35010; A35010.
R; A35010; A35010.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BIOL.
                                                                                                                                                                                                                                                       A38208; A38208.

1INR; 31-JUL-94.

1NCF; 07-DEC-95.

1EXT; 11-JAN-97.

191190; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N H., NOVICK D., WALLACH D.;
CHEM. 265:1531-1536(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13:219-224(1992).
 100245
 JOINED.
                                                                       POTENTIAL.
CYTOPLASMIC (POTENTIAL).
4 X THER-CYS.
THER-CYS 1.
THER-CYS 2.
THER-CYS 3.
THER-CYS 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KHONO H.,
                                                                                                                                                   TUMOR NECROSIS FACTOR RECEPTOR TUMOR NECROSIS FACTOR BINDING EXTRACELLULAR (POTENTIAL).
                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SPRANG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-211.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SCHOENFELD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S.R.;
                                                                                                                                                                                                           SIGNAL;
                                                                                                                                                                                                           APOPTOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     H. -J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APOPTOSIS AND
                                                                                                                                                                PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TO
```

```
RESULTANT REPORT OF THE PROPERTY OF THE PROPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
Matches 1
                                                                                                                SEQUENCE OF 21-165.
MEDLINE: 75211304.
MORGAN F.J., BIRKEN S., (
J. BIOL. CHEM. 250:5247-5
[6]
                                                                                                                                                                                                                                                             SEQUENCE OF 1-20.
MEDLINE; 81117268.
BIRKEN S., FETHERSTON J., CANFIELD BIRKEN S., CAMPIELD BIRKEN S., CAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGHB_HUMAN STANDARD; PRT; 165 AA. P01233; P12133; P21-JUL-1986 (REL. 01, CREATED) 21-JUL-1986 (REL. 01, LAST SEQUENCE UPDATE) 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE) CHORIOGONADOTROPIN BETA CHAIN PRECURSOR (CHORIONIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
CARBOHYD
PRELIMINARY SEQUENCE OF 21-165.
MEDLINE; 74011367.
CARLSEN R.B., BAHL O.P., SWAMINATHAN
J. BIOL. CHEM. 248:6810-6827(1973).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. MEDLINE; 84008141. POLICASTRO P., OVI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE; 84093590.
TALMADGE K., VAMVAKOPOULOS
NATURE 307:37-40(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
MEDLINE; 81012134.
FIDDES J.C., GOODMAN H.M.
NATURE 286:684-687(1980).
                                                                                                                                                                                                                                                                                                                                                                                                                                                             BOIME I.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUBUNIT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EUKARYOTA; METAZOA;
EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HOMO SAPIENS (HUMAN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    161 KONTVCTCHAGFFLRENECVSCS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41 DSYCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23
                                                                                                                                                                                                                                                                                                                                                                                                                                     BIOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KONTVCTCHAGFFLRENECVSCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                  CHEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          48.0%;
llarity 99.3%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                            258:11492-11499(1983)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OVITT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              143
166
179
199
195
195
145
446
446
50494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .
.
                                                                                                                                             CANFIELD R.E.; -5258(1975).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HOSHINA M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POTENTIAL.
POTENTIAL.
POTENTIAL.
MISSING (IN REF. 4).
GPAA -> APP (IN REF. 4
GPAA -> CEOEAOGF CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 1124; DB 1;
Pred. No. 2.90e-242;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FIDDES
                                                                                                                                                                                                                                                                                                                  R.E.,
                                z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FUKUOKA H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ċ
                                                                                                                                                                                                                                                                                                                     BOIME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BOOTHBY M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GONADOTROPHIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
Ş
                        밁
                                        Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           [7]
SEQUENCE OF 1-5 k,
MEDLINE; 86195987
. POLICASTRO P.F.,
7 NIOL. CHEM. 7
                                                                                                                                                                                                                                             -1- TISSUE SPECIFICITY: PLACENTY
-1- DEVELOPMENTAL STAGE: MADE BY
EMBL; M0117; G180437; -.
EMBL; M13504; G463088; -.
EMBL; M13505; G463089; -.
EMBL; M13505; G463099; -.
EMBL; M13503; G463090; -.
EMBL; K03189; G180453; -.
EMBL; K03189; G180453; JOINED.
EMBL; K03188; G180453; JOINED.
PIR; A01502; KTHUB.
PDB; 1HCN; 30-SEP-94.
                                                                                                                               PROSITE;
HORMONE;
SIGNAL
CHAIN
DISULFID
CARBOHYD
                                                                                CARBOHYD
VARIANT
                                                                                               CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                     LAPTHORN A.J., HARRIS D.C., LITTLEJOHN A., LUSTBADER J.W., CANFIELD R.E., WACHIN K.J., MORGAN F.J., ISAACS N.W.;
NATURE 369:455-461 (1994)
-1- FUNCTION: STLMULATES THE OVARIES TO SYNTHESIZE THE STEROIDS THAT ARE ESSENTIAL FOR THE MAINTENANCE OF PREGNANCY.
-1- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, LUTROPIN, FOLLITROPIN AND GONADOTROPIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                       STRUCTURE OF CARBO
MEDLINE; 92314469
WEISSHAAR G., HIY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY ASSIGNMENT MEDLINE; 81215630.
MISE T., BAHL O.P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE; 90094415
SACCUZO BEEBE J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RUDDON R.W.;
J. BIOL. CHEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DISULFIDE BONDS
                                                                                                                                                                                                                                                                                                                                                                                                                                  GLYCOBIOLOGY 1:393-404(1991).
                                                                                                                 CARBOHYD
                                                                                                                         CARBOHYD
                                                                                                                                                                                                                         PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                 K-RAY CRYSTALLOGRAPHY (3.0 ANGSTROMS)
          169
                        27
                 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 86
       PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 228
                                               Similarity
                                                                                                                                                                                                      PS00261; GLYCO_HORMONE_BETA_1; 1. PS00689; GLYCO_HORMONE_BETA_2; 1. GLYCOPROTEIN; SIGNAL; 3D-STRUCTURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OF 1-5 FROM N.A.
86195987.
                                                                                                                                                                                                                                                                                                                                                                                                          94261179.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 90094415.
                                                                                                                                                                                                                                        02; KTHUB.
; 30-SEP-94.
; 01-NOV-94.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         OF CARBOHYDRATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P.F., DANIELS-MCQUEEN S.,
HEM. 261:5907-5916(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                        ., HIYAMA J.,
                                                               43 92
44 108
58 110
13 120
13 33
3 50
141
147
158
158
17739 MW;
                                        44.08;
larity 100.08;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        265:312-317(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         256:6587-6592(1981)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOUNTJOY K., KRZESICKI R.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ဝ္
                                                                                                                                                                                                                                                                                                                PLACENTA.
:: MADE BY THE FIRST TRIMESTER PLACENTA.
                                                                                                                                                                                                                                                                                                                                                                                                                                        RENWICK A.G.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFIDE BONDS
                                       Score 1030;
Pred. No. 8.
0; Mismatc
                                                                               U
                                                                                                                                                                                        CHORIOGONADOTROPIN BETA CHAIN
                                                                       -> A (IN FF1D4802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARLE G.,
                                    DB 1;
8.92e-219;
79 0;
                                                                       GENE 6).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BOIME I.;
                                                       Length 165;
                                        Indels
                                       0;
                                       Gaps
                                       0
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 몺
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TNR1_PIG
P50555;
01-OCT-1996
      DISULFID
CARBOHYD
CARBOHYD
                                                                                                             REPEAT
REPEAT
REPEAT
DOMAIN
DISULFID
                                                                                                                                                      DOMAIN
DOMAIN
REPEAT
                                                                                                                                                                                                                       PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                TNFR1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TUMOR NECROSIS
                                                                                                                                                                               TRANSMEM
                                                                                                                                                                                               CHAIN
                                                                                                                                                                                                       SIGNAL
                                                                                                                                                                                                                                        PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                               EUKARYOTA;
                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                 FISSUE-KIDNEY;
                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87
                                                                                                                                                                                                                                                U19994;
```

```
C -!- FUNCTION: RECEPTOR FOR TNF-ALPHA. THE ADAPTOR MOLECULE FADD
C RECRUITS CASPASE-8 TO THE ACTIVATED RECEPTOR. THE RESULTING
C RECRUITS CASPASE-8 TO THE DEATH-INDUCING SIGNALING COMPLEX (DISC)
C REFORMS CASPASE-8 PROTEOLYTIC ACTIVATION WHICH INITIATES THE
SUBSEQUENT CASCADE OF CASPASES (ASPARTATE-SPECIFIC CYSTEINE
C PROTEASES) MEDIATING APOPTOSIS (BY SIMILARITY).
C -!- SUBUNT: THE FINDING TO THE EXTRACELLULAR DOMAIN OF TNFR1 LEADS TO
C HOMOTRIMERIZATION. ONCE AGGREGATED THE RECEPTORS DEATH DOMAINS
C PROVIDE A NOVEL MOLECULAR INTERFACE THAT INTERRACTS SPECIFICALLY
C WITH THE DEATH DOMAIN OF TRADD. VARIOUS TRADD. INTERRACTING
C PROTEINS SUCH AS TRAFS, RIP AND POSSIBLY FADD, ARE RECRUITED TO
C TNFR1 COMPLEX BY THEIR ASSOCIATION WITH TRADD. THIS COMPLEX
C ACTIVATES AT LEAST TWO DISTINCT SIGNALING CASCADES, APOPTOSIS AND
C NF-KAPPA B SIGNALING (BY SIMILARITY).
C -!- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN.
-!- SIMILARITY: CONTAINS A LA-NGFR/TNFR-TYPE CYSTEINE-RICH REGION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-OCT-1996 (REL.
01-OCT-1996 (REL.
01-NOV-1997 (REL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUTER B., PAULI U.H.;
GENE 163:263-266(1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EUTHERIA; ARTIODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE; 96011645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SCROFA (PIG).
ARYOTA; METAZOA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SLPSPSRLPGPSDTPILPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SLPSPSRLPGPSDTPILPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9994; G1141753; -.
PS00652; INFR_NGFR_1; 3.
PS50050; INFR_NGFR_2; 2.
PS50017; DEATH_DOMAIN; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TRANSMEMBRANE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      34, CREATED)
34, LAST SEQUENCE UPDATE)
35, LAST ANNOTATION UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                          461
233
461
195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RECEPTOR 1 PRECURSOR (P60) (TNF-R1) (P55).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GLYCOPROTEIN;
                                                                                                                                                                                                                                                                                                                                                                            4 X INFR-CYS.
INFR-CYS 1.
INFR-CYS 2.
                     POTENTIAL.
                                                                                                                                                                                                                                                                                                                                       TNFR-CYS 3.
POTENTIAL
                                                                                                                                                                                                                                                                                                                     DEATH DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                              CYTOPLASMIC (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EXTRACELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTI
                                                                                                                                                                Y SIMILARITY.
                                                               SIMILARITY
SIMILARITY
                                                                                                                           SIMILARITY.
                                                                                                       SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NECROSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REPEAT; SIGNAL; APOPTOSIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FACTOR RECEPTOR 1. (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPLEX
APOPTOSIS AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
```

```
Ş
                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       맗
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                       Matches
                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                    CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                   P07434;
01-APR-1988
01-APR-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
SEQUENCE
                                                                                                               CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                SUBUNIT).
                                                                                                                                                                                                HORMONE;
                                                                                                                                                                                                              HSSP; P01233; 1HCN.
PROSITE; PS00261; GLYCO_HORMONE_BETA_1;
PROSITE; PS00689; GLYCO_HORMONE_BETA_2;
                                                                                                                                                                                                                                                                                                                                     CRAWFORD R.J., TREGEAR G.W., NIALL H.D.; GENE 46:161-169(1986).
                                                                            SEQUENCE
                                                                                                                                                                                                                                            EMBL; M14966; G176573; PIR; A25808; KTBAB.
                                                                                                                                                                                                                                                                                                                                                                                     EUTHERIA;
                                                                                                                                                                                                                                                                                                                                                                                            PAPIO ANUBIS
EUKARYOTA; MI
                                                                                                                                                                                                                                                                                                                                                                                                                              CHORIOGONADOTROPIN BETA CHAIN PRECURSOR (CHORIONIC GONADOTROPHIN BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                          01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGHB_PAPAN
                                                                                                                                                                                                                                                                                                                                                           MEDLINE;
  169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        101
                    27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41
                                                                                                                                                                                                                                                                                       FUNCTION: STIMULATES THE OVARIES TO SYNTHESIZE THE STEROIDS ARE ESSENTIAL FOR THE MAINTENANCE OF PREGNACY.
SUBUNIT: HEFTEROBINER OF A COMMON ALPHA CHAIN AND A UNIQUE BE CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, LUTROPIN, FOLLITROPIN AND GONADOTROPIN.
                                                                                                                                                                                                                                                              TISSUE SPECIFICITY: PLACENTA.
THERE ARE AT LEAST FIVE COPIES OF
TWO OF THESE ARE EXPRESSED IN THE
ESLCPQGKYSHPQNRSICCTKCHKGTYLHNDCLGPGLDTDCRECDNGTFTASENHLTQCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KONTYCTCHAGFFLRENECVSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYMSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SCSKCRSEMSQVEISPCTVDRDTVCGCRKNQYRKYWSETLFQCLNCSLCPNGTVQLPCLE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SYCPGGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KODTICNCHSGFFLRDKECVSC
                                       113;
                                     h 36.6%;
Similarity 81.3%;
113; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                          GLYCOPROTEIN;
                                                                                                                                                                                                                                                                                                                                                                   FROM N.A.
                                                                                                                                                                                                                                                                                                                                                        87106851.
                                                                                                                                                                                                                                                                                                                                                                                     PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             151
461
                                                                                                                                                                                                                                                                                                                                                                                             METAZOA;
                                                                                                                                                                                                                                                                                                                                                                                                                                         (REL.
                                                                                            Conservative
                                                                            Ä,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                          07,
34,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 151
50696
                                                                                             92
130
108
110
120
120
141
147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40.8%;
                                                                                                                                                                                                                                                                                                                                                                                             CHORDATA;
                                                                            17592 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                         LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CREATED)
                                                                                                                                                                                                         SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WW;
                                                                                CHORIOGONADOTROPIN BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182
                                      Score
Pred.
14; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 955; DB 1; L
Pred. No. 4.23e-200;
                                                                                                                                                                                                 BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                            VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8E2C350A CRC32;
                                                                           78987D30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                      Mismatches
                                              857; DB 1; L
No. 8.42e-176;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             165
                                                                                                                                                                                                                                                               CG-RELATED GENES
BABOON PLACENTA.
                                                                           CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₿
                                                                                                                                                                                                                                                                                                                                                                                           TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 461;
                                                      Length 165;
                                                                                                                                                                                      BETA CHAIN
                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                       AND
                                    0
                                                                                                                                                                                                                                                                       AT LEAST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        82
                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
MEDLINE; 91187885.
LEWIS M., TARTAGLIA L.A.
WONG G.H., CHEN E.Y., GG
PROC. NATL. ACAD. SCI. U
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TNR1_MOUSE STAN
P25118;
01-MAY-1992 (REL. 2
01-MAY-1992 (REL. 2
01-NOV-1997 (REL. 3
            EMBL;
                                                                                                                                                                                                                                                                                                                       GOODWIN R.G., ANDERSON D., JERZY R., DAV COPELAND N.G., JENKINS N.A., SMITH C.A.; MOL. CELL. BIOL. 11:3020-3026(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                               TNFR1 OR TNFR-1.
MUS MUSCULUS (MOUSE).
EUKARYOTA; METAZOA; C
                                                                                                                                                      SEQUENCE FROM N.A. MEDLINE; 93156721. ROTHE J., BLUETHMA
                                                                                                                                                                                               BEBO
                                                                                                                                                                                                                                                                          BARRETT K., TAYLOR-FISHWICK D.A., COPE A.P., GRAY P.W., FELDMANN M., FOXWELL B.M.J.; EUR. J. IMMUNOL. 21:1649-1656(1991).
                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. MEDLINE; 91285014.
                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
MEDLINE; 91246168.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      TUMOR NECROSIS FACTOR
                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                    ROTHE J.G.,
                                                                                                                                                                                                                                          MEDLINE; 92039815.
                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                       EUTHERIA; RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          147
                                                                                                                                                                                                                             ROTHE J.G., BROCKHAUS M., GENTZ MMUNOGENETICS 34:338-340(1991)
                                                                                                                                                                                      MMUNOGENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           87
                                                                                                                                                                                            B.F., LINTHICUM D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SPPSPSRLLEPAGTPFLPQ 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IRLPGCPPGVDPMVSVPVALSCRCALCRRSTSDCGGPKDHPLTCDDPNLQASSSSKDPPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SLPSPSRLPGPSDTPILPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP
M60468; G199826; -. M59377; G202097; -.
                                                                                                                                                                                     39:450-451(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              35,
                                                                                                                                                                                                                                                                                                                                                                                                                              CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                       GOEDDEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                     LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
RECEPTOR 1 PRECURSOR (P60)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CREATED
                                                                                                                                                                                             .s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             307
                                                                                                                                                                                                                                                                                                                                                                     A., BENNETT G.L., K
D.V.;
88:2830~2834(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                   ₽
.
                                                                                                                                                                                                                                                                                                                                                                                  BENNETT
                                                                                                                                                                                                                                    LESSLAUER
                                                                                                                                                                                                                                                                                                                                         DAVIS T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₿
                                                                                                                                                                                                                                                                                                                                                                                      G.L.,
                                                                                                                                                                                                                                                                                         KISSONERGHIS A.M.,
                                                                                                                                                                                                                                    Σ.
                                                                                                                                                                                                                                                                                                                                          BRANNAN C.I.,
                                                                                                                                                                                                                                                                                                                                                                                        RICE G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TNF-R1) (P55).
                                                                                                                                                                                                                                                                                                                                                                                        <u>ن</u>
                                        AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           146
                                                                                       ö
```

```
RESULT AC PIN DIT OCCUPANT OCC
                                                                                                                                                                                                                                                                                                                                                                                                ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              $\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac
                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL: X59238; G53579;
EMBL: X57796; G54849;
EMBL: L26349; G430733;
EMBL: M76656; G202102;
EMBL: M88067; G202102;
EMBL: M76655; G202102;
EMBL: M76655; G202102;
PIR; A38634; GQMST1.
PIR; S16677; S16677.
PIR; S19021; S19021.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RECEPTOR;
SIGNAL
CHAIN
                            LT 6
P22934:
P22934:
P22934:
O1-AUG-1991 (REL. 19, CREATED)
O1-MAR-1992 (REL. 21, LAST SEQUENCE UPDATE)
O1-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
TUMOR NECROSIS FACTOR RECEPTOR 1 PRECURSOR (P60) (TNF-R1) (P55).
TNFR1 OR TNFR-1.
RATTUS NORVEGICUS (RAT).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
DOMAIN
REPEAT
REPEAT
REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                        161
                                                                                                                                                                                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                                                                                   143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41
                                                                                                                                                                                                                                                                                                                                                                                                  83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TQNTVCNCHAGFFLRESECVPCS 183
                                                                                                                                                                                                                                                                                                                KONTVCTCHAGFFLRENECVSCA 165
                                                                                                                                                                                                                                                                                                                                                                                                                        SCKTCRKEMSQVEISPCQADKDTVCGCKENQFQRYLSETHFQCVDCSPCFNGTVTIPCKE 160
                                                                                                                                                                                                                                                                                                                                                                                                  SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PS00652; TNFR_NGFR_1; 3 PS50050; TNFR_NGFR_2; 3 PS50017; DEATH_DOMAIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TRANSMEMBRANE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; G53579; -.
; G54849; -.
; G430733; -.
; G202102; -.
; G202102; JOINED.
; G202102; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              166
179
191
195
195
202
202
394
50129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TNFR1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         35.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLYCOPROTEIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 841;
Pred. No. 7.
23; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POTENTIAL.
R -> G (IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL.

CYTOPLASMIC (POTENTIAL).

4 X THER-CYS.

THER-CYS 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENTIAL.
TUMOR NECROSIS FACTOR RECEPTOR 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEATH DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TNFR-CYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TNFR-CYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TNFR-CYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ωw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -> G (IN
4B6EEC09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Y SIMILARITY.
Y SIMILARITY.
Y SIMILARITY.
Y SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REPEAT; SIGNAL; APOPTOSIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Le
7.59e-172;
ches 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REF. 6
CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
16
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                  В
                                                                                                                                                                                                                          δÃ
                                                                                                 밁
                                                                                                                                                                                                                                                                      В
```

```
CC -!- FUNCTION: RECEPTOR FOR TWF-ALPHA. THE ADAPTOR MOLECULE FADD
CC RECRUITS CASPASE-8 TO THE ACTIVATED RECEPTOR. THE RESULTING
CC AGGREGATE CALLED THE DEATH-INDUCING SIGNALING COMPLEX (DISC)
CC PERFORMS CASPASE-8 PROTEDLYTIC ACTIVATION WHICH INITIATES THE
CC SUBSEQUENT CASCADE OF CASPASES (ASPARTARE-SPECIFIC CYSTEINE
CC -!- SUBUNIT: TWN BINDING TO THE EXTRACELLULAR DOMAIN OF TNFR1 LEADS TO
CC HOMOTRIMERIZATION, ONCE AGGREGATED THE RECEPTORS DEATH DOMAINS
CC PROVIDE A NOVEL MOLECULAR INTERFACE THAT INTERACTS SPECIFICALLY
CC PROTEINS SUCH AS TRAFS, RIP AND POSSIBLY FADD. THIS EXCRUITED TO
CC PROTEINS SUCH AS TRAFS, RIP AND POSSIBLY FADD, ARE RECRUITED TO
CC TIFR1 COMPLEX BY THEIR ASSOCIATION WITH TRADD. THIS COMPLEX
CC ACTIVATES AT LEAST TWO DISTINCT SIGNALING CASCADES, APOPTOSIS AND
CC I-- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN
CC I-- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN
CC I-- SUBCELLULAR CONTAINS A LA-NGFR/TMFR-TYPE CYSTEINE-RICH REGION.
DR PIB: M63122; G207362; -.
                                                                                                                                                                                                                     Query Match
Best Local :
                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                       DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TRANSMEM
DOMAIN
DOMAIN
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; |
RECEPTOR;
SIGNAL
                                                                                                                                                                                                                                                                                     CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.

MEDLINE; 91090841.

HIMMLER A., MAUREFFOGY I., KROENKE M., SCHEURICH P.,
LANTZ M., OLSSON I., HAUDTMANN R., STRATOWA C., ADOLF
DNA CELL BIOL. 9:705-715(1990).

-I- FUNCTION: RECEPTOR FOR TNF-ALPHA. THE ADAPTOR MOLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REPEAT
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REPEAT
                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                         CARBOHYD
                                161
                                                                                                 101
                                                                 83
                                                                                                                                  23
                                                                                                                                                                   41
                                                                                                                                ; м63122; G207362;
В36555; В36555.
                                                              KONTVCTCHAGFFLRENECVSCA
                                KONTYCHCHAGFFLSGNECTPCS 183
                                                                                                                                                                                                   Similarity 68.5%; 98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PS00652; TNER_NGER_1; 3.
PS50050; TNER_NGER_2; 3.
PS50017; DEATH_DOMAIN; 1.
PS50017; DEATH_DOMAIN; 1.
TRANSMEMBRANE; GLYCOPROTEIN;
                                                                                                                                                                                                                                                                     201
461 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1TNR
                                                                                                                                                                                                                                                              143
158
166
179
191
195
195
201
201
50969
                                                                                                                                                                                                                   34.6%;
                                                                                                                                                                                                                                                                       MW;
                                                                                                                                                                                                  Score 809; DB 1; I
Pred. No. 5.98e-164;
21; Mismatches 24;
165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TNFR-CYS 3.
                                                                                                                                                                                                                                                                                     POTENTIAL
                                                                                                                                                                                                                                                                                                         POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 X TNFR-CYS
TNFR-CYS 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TUMOR NECROSIS FACTOR RECEPTOR 1. EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                         POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEATH DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                         Y SIMILARITY.
                                                                                                                                                                                                                                                                       82F68B08 CRC32;
                                                                                                                                                                                                                                                                                                                                         SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY
                                                                                                                                                                                                     Mismatches 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REPEAT; SIGNAL; APOPTOSIS
                                                                                                                                                                                                                                   Length 461;
                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PFIZENMAIER G.R.;
                                                                                                                                                                                                     0
                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
.
                                                                                                                                                                                                     0,
```

```
THE THE TARGET OF THE THE TARGET OF THE TARG
DISEASE N
SIGNAL
CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE; 732
CLOSSET J.,
                                                                                                                                                                                                                                                                  -!- TISSUE SPECIFICITY: PITUITARY.
-!- DISEASE: DEFECTS IN LHB ARE A CAUSE OF HYPOGONADISM WHICH CHARACTERIZED BY INFERTILITY AND PSEUDOHERMAPHRODITISM.
EMBL; X00264; E28368; -.
EMBL; S71273; E91454; -.
PIR; A01497; UTHUB.
HSSP; P01233; 1HCN.
MIM; 152780; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LSHB_HUMAN
P01229;
21-JUL-1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-JUL-1986 (REL. 01,
01-NOV-1995 (REL. 32,
01-NOV-1995 (REL. 32,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WEISS J., AXEI
JAMESON J.L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7 E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; C
                                                                                                                                                                                                      PROSITE; PS00261; GLYCO_HORMONE_BETA_1; 1. PROSITE; PS00689; GLYCO_HORMONE_BETA_2; 1. HORMONE; GLYCOPROTEIN; SIGNAL; PSEUDOHERMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE; 92357029
KEUTMANN H.T., HUI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRUCTURE BY NMR OF 58-77.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WEISSHAAR G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRUCTURE OF CARBOHYDRATE MEDLINE; 91122088.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SHOME B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BIOCHIM. BIOPHYS. ACTA 412:70-81(1975).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SAIRAM M.R., LI C.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 21-141.
MEDLINE; 76062547.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
MEDLINE; 84093590.
TALMADGE K., VAMVAKOPOULOS
NATURE 307:37-40(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EUTHERIA; PRIMATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LUTROPIN BETA CHAIN PRECURSOR (LUTEINIZING HORMONE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE; 92085985.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY PARTIAL SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE; 73090987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                FUNCTION: PROMOTES SPERMATOGENESIS AND OVULATION BY STIMUL THE TESTES AND OVARIES TO SYMPHESIZE STEROIDS. SUBUNIT: HESTERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, LOTROPIN, FOLLITROPIN AND GONADOTROPIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FUNCTION: PROD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    J. BIOCHEM. 195:257-268(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 73221227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ENDOCRINOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AXELROD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PARLOW A.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , HENNEN G., LEQUIN
29:97-100(1973).
    113
54
50
113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HUA Q.-X., 1
L. 6:904-913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        326:179-183(1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          METAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WHITCOMB R.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21-141.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WEISS M.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N.C.,
                 LUTROPIN BETA C
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36:618-621(1973).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                      PSEUDOHERMAPHRODITISM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FIDDES J.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HARRIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      141 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIMIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TETRAPODA; MAMMALIA;
                                                                                                                                          CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ۳.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .
ES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CROWLEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (LSH-B) (LH-B).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A UNIQUE BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BY STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W.F.,
```

```
밁
                                   Š
                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SPITIT
                                                                       Query Match
Best Local &
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                    CGHB_CALJA
P51500;
01-OCT-1996
01-OCT-1996
01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CONFLICT
CONFLICT
                                                                                                                  CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                               CALLITHRIX JACCHUS (
EUKARYOTA; METAZOA;
EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                  SINULA A.P., AMATO F., FAAST R., LOPATA A., BIOL. REPROD. 53:380-389(1995).
-I- FUNCTION: STIMULATES THE OVARIES TO SYM
                                                                                                                                                                                                                                                                                                                                                                                                   SUBUNIT).
                                                                                                                                                                                                                                                                                                                                                                                                          CHORIOGONADOTROPIN BETA CHAIN PRECURSOR (CHORIONIC GONADOTROPHIN BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VARIANT
                                                                                                           SEQUENCE
                                                                                                                                                                                                            SIGNAL
                                                                                                                                                                                                                    HORMONE;
                                                                                                                                                                                                                              PROSITE;
                                                                                                                                                                                                                                      PROSITE;
                                                                                                                                                                                                                                               EMBL; U04447;
                                                                                                                                                                                                                                                                                                                  MEDLINE; 96115012.
SIMULA A.P., AMATO
                                                                                                                                                                                                                                                                                                                                      TISSUE-PLACENTA;
                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                    169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              169
                  87
                                                     27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27
                                                                                                                                                                                                                                                     ARE ESSENTIAL FOR THE MAINTENANCE OF PREGRANCY.
SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA
CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,
LUTROPIN, FOLLITROPIN AND GONADOTROPIN.
TISSUE SPECIFICITY: PLACENTA.
IRLPGCPRGVDPVVSFPVALSCRCGPCRRSTSDCGGPKDHPLTCDHPQL 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . Similarity
92; Conser
                                                                       Similarity
90; Conser
                                                                                                                                                                                                                    GLYCOPROTEIN;
                                                                                                                                                                                                                           PS00261; GLYCO_HORMONE_BETA_1; PS00689; GLYCO_HORMONE_BETA_2;
                                                                                                         21
29
43
46
54
58
113
113
1146
1151
151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   132
141
                                                                                                                                                                                                                                                                                                                                                                                                                   (REL. 34, CREATED)
(REL. 34, LAST SEQUENCE UPDATE)
(REL. 34, LAST ANNOTATION UPDATE)
                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                             G606607;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   135
15345
                                                                                                                   164
77
130
130
110
120
146
                                                                                                                                                                                                                                                                                                                                                                        (COMMON MARMOSET).
CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                               30.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31.6%;
                                                                                                          17712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    39
                                                                                                                                                                                                                    SIGNAL.
                                                                                                           MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ¥
                                                                      Score 709; 1
Pred. No. 2.:
25; Mismatcl
                                                                                                                 BY SIMILARITY
CHORIOGONADOTROPIN E
BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q -> R (IN HYPOGONADI:

RECEPTOR-BINDING).

E -> Q (IN REF. 2).

MISSING (IN REF. 2).

HPQL -> PQH (IN REF. 2).

HPQL -> PQH (IN REF. 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 740; DB 1; I
Pred. No. 5.55e-147;
                                                                                                          E36A4DB3
                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R (IN HYPOGONADISM;
                                                                                                                                                                                                                                                                                                  TO SYNTHESIZE
                                                                                                                                                                                                                                                                                                                                                                                                                                                       164
                                                                      DB 1; Le
1.18e-139;
ches 23;
                                                                                                          CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₿
                                                                                                                                                                                                                                                                                                                  BERKA J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                       Length 164;
                                                                                                                                                                                                  BETA CHAIN.
                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                  HH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LACK
                                                                                                                                                                                                                                                                                                                    NORMAN R.J.;
                                                                                                                                                                                                                                                                                                  STEROIDS
                                                                       1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ဝှု
                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86
                                    228
                                                     86
                                                                       ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

Š

229

146

NLTSPSQLLEPADPPLVPQ

164

```
RESULTATION OF THE PROPERTY OF
  RESULT
ID LS
AC PC
DT 113
DT 01
DT 01
DE LI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 8
                         LSHB_BOVIN
P04651;
13-AUG-1987
01-JAN-1988
01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHOPINEAU
SUBMITTED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LSHB_EQUAS STANDARD; PRT; 169 AA. Ep19794; O1-FEB-1991 (REL. 17, CREATED) O1-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE) O1-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DISULFID
DISULFID
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE;
HORMONE;
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LEIGH S.E.A., STEWART F.;

7. MOL. ENDOCRINOL. 4:143-150(1990).

-!- FUNCTION: PROMOTES SPERMATOGENESIS AND OVULATION BY STIMULATING THE TESTES AND OVARIES TO SYNTHESIZE STEROIDS.

-!- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, LUTROPIN, FOLLITROPIN AND GONADOTROPIN.

EMBL; X80116; G510971; -

EMBL; X80116; G510971; -

EMBL; X53669; E27544; ALT_SEQ.
13-AUG-1987 (REL. 05, CREATED)
01-JAN-1988 (REL. 06, LAST SEQUENCE UPDATE)
01-CCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
01-CCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
LUTROPIN BETA CHAIN PRECURSOR (LUTEINIZING HORMONE) (LSH-B) (LH-B).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EQUUS ASINUS (DONKEY).
EUKARYOTA; METAZOA; CH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EUTHERIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LUTROPIN/CHORIOGONADOTROPIN BETA CHAIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY SEQUENCE OF 105-169 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JEQUENCE FROM N.A.
THOPINEAU M., COMBARNOUS Y.,
SUBMITTED (JUL-1994) TO EMBL,
                                                                                                                                                                                                        289
                                                                                                                                                                                                                                              144
                                                                                                                                                                                                                                                                                            229
                                                                                                                                                                                                                                                                                                                                                                                  169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             289
                                                                                                                                                                                                                                                                                                                                     87
                                                                                                                                                                                                                                                                                                                                                                                                                         27
                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SLPSPSRLPGPSDTPILPQ
                                                                                                                                                                                                                                                 QPLTSTSTPTPGAS 157
                                                                                                                                                                                                     -SLPSPS-RLPGPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P01233;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
85; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PS00261; GLYCO_HORMONE_BETA_1; PS00689; GLYCO_HORMONE_BETA_2; GLYCOPROTEIN; SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90262634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PERISSODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1HCN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ΑA;
                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  169
77
92
130
130
110
110
120
                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17943 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S Y., ALLEN W.R., S
EMBL/GENBANK/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             307
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 630; DB 1; Leux
Pred. No. 3.88e-120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LUTROPIN/CHORIOGONADOTROPIN BETA CHAIN
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROBABLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BY SIMILARITY
                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9D4B5421 CRC32;
                                                                                                               141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STEWART F.;
J DATA BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 169;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (LSH-B/CG-B).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                              228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RRACOS SOCIOLO PER COCO SOCIO PER COCO SOCIO PER COCO SOCIO PER COCO SOCIO PER COCO 
                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LHB.
BOS TAURUS
EUKARYOTA; I
EUTHERIA; A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DISULFID
DISULFID
CARBOHYD
                                                                                                                   ISHB_HORSE STANDARD; PRT; 169 AA. P08751; P01234; P01234; P01-AUG-1988 (REL. 08, CREATED) O1-JUL-1993 (REL. 26, LAST SEQUENCE UPDATE) O1-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE) LUTROPIN/CHORIOGONADOTROPIN BETA CHAIN PRECUR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HSSP; P01
PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MAGHUIN-ROGISTER G., HENNEN G.;
EUR. J. BIOCHEM. 39:235-253(1973).
-:- FUNCTION: PROMOTES SPERMATOGENESIS AND OVULATION BY STIMULATING THE TESTES AND OVARIES TO SYNTHESIZE STEROIDS.
-!- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, LUTROPIN, FOLLITROPIN AND GONADOTROPIN.
EMBL; M11007; 6163301; -.
EMBL; M11506; G163299; -.
                                     EQUUS CABALLUS (HORSE).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; PERISSODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A. MEDLINE; 85207729. VIRGIN J.B., SILVER
SEQUENCE FROM N.A.
                                                                                                    LHB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR; A01499; UTBOB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MAURER R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. MEDLINE; 85182575.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           J. BIOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HORMONE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 21-139. MEDLINE; 74075724.
                                                                                                                                                                                                                                                                                                                  229
                                                                                                                                                                                                                                                                                                                                                                                                  169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . BIOL.
                                                                                                                                                                                                                                                                                                                                                         87
                                                                                                                                                                                                                                                                                                                                                                                                                                            27
                                                                                                                                                                                                                                                                                                             Similarity 72; Consen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PS00261; GLYCO_HORMONE_BETA_1; PS00689; GLYCO_HORMONE_BETA_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIGNAL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ARTIODACTYLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (BOVINE).
METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26.2%;
larity 64.9%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1
29
29
443
443
5443
113
33
113
113
112
112
122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             260:7072-7077(1985)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LHCN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      260:4684-4687(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GLYCOPROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         126
15202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В.Ј.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 THOMASON A.R., NILSON J.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MISSING (IN REF. 2).

Q -> E (IN REF. 3).

P -> S (IN REF. 2).

GP -> PG (IN REF. 3).

Q -> E (IN REF. 3).

W; 82879D1F CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 614; DB 1; Lo
Pred. No. 2.94e-116;
22; Mismatches 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LUTROPIN BETA CHAIN.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                        PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 141;
                                                                                                                        (LSH-B/CG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                     228
                                                                                                                                                                                                                                                                                                                                                                                                                                            86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
RESULT
ID LA
AC PI
DT 2:
                                                                                                  밁
                                                                            Ş
                                                                                                                     Š
                                                                                                                                           B
                                                                                                                                                                 å
                                                                                                                                                                                       В
                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                 Query Match
 LSHB_SHEEP
P01231;
21-JUL-1986
01-NOV-1995
                                                                                                                                                                                                                                                                          DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                     PROSITE;
PROSITE;
HORMONE;
SIGNAL
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL;
PIR; /
PIR; /
PIR; /
PIR; /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DAMM J.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE; 92357035.

SHERMAN G.B., WOLFE M.W., FARMERIE T.A., CLAY C.M., THREADGILL D.S., SHARP D.C., NILSON J.H.;

MOL. ENDOCRINOL. 6:951-959(1992).

[2]
                                                                                                                                                                                                                                                                                                                                                                                                          HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DAMM J.B.L., HARD K., KAMERLING J.P., VLIEGENTHART J.F.G.;
EUR. J. BICCHEM. 189:175-183(1990).
-I- FUNCTION: PROMOTES SPERMATGGENESSIS
                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRUCTURE OF CARBOHYDRATES MEDLINE; 90235854.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WARD D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHORIOGONADOTROPIN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUGINO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BOUSFIELD G.R., LIU W.-K., SUGINO H., J. BIOL. CHEM. 262:8610-8620(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 21-169.
MEDLINE: 87250476.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE OF 21-169.
                                                                                                                                                                   169
                                                                                                                        229
                                                                              289
                                                                                                 144
                                                                                                                                            87
                                                                                                                                                                                      27
                                                                                                                                                                                                            Local Similarity
mes 84; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIOGONADOTROPIN, PARTIAL SEQUENCE.
RD D.N., MOORE W.T. JR., BURLEIGH B
PROTEIN CHEM. 1:263-280(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                 L; S41704; G252741; A01503; KTHOB.; A29304; A29304.; A29305; A29305.; A41917; A41917.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            FUNCTION: PROMOTES SPERMATOGENESIS AND OVULATION BY STIMULATING THE TESTES AND OVARIES TO SYNTHESIZE STEROIDS.
SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, COLLITROPIN AND GONADOTROPIN.
LUTROPIN, FOLLITROPIN AND GONADOTROPIN.
PTM: AT LEAST FOUR O-GLYCOSYLATION SITES ARE PRESENT.
L; S41704; G252741; -.
                                                                                                                                                                           PLCRPINATLAAEKEACPICITETTSICAGYCPSMVRVMPAALPAIPQPVCTYRELRFAS
                                                                                                QPLTSTSTPTPGAS 157
                                                                                                                                 IRLPGCPPGVDPMVSFPVALSCHCGPCQIKTIDCGVFRDQPLACA-P--QASSSSKDPPS 143
                                                                                                                                                              PRCRPINATLAVEKEGCPVCITVNTTICAGYCPIMTRVLQGVLPALPQVVCNYRDVRFES
                                                                             -SLPSPS
                                                                                                                    IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OL. CHEM.
                                                                                                                                                                                                                                                                                                                                                                                                          P01233; 1HCN
                                                                                                                                                                                                                                                                                                                                                                       PS00261; GLYCO_HORMONE_BETA_1; PS00689; GLYCO_HORMONE_BETA_2; GLYCOPROTEIN; SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87250475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BOUSFIELD G.R., MOORE W.T. IEM. 262:8603-8609(1987).
                                                                                                                                                                                                                                                       169
 (REL.
                                                                                                                                                                                                                                                                           29
29
54
113
33
                                                                             -RLPGPS
                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                       ξ,
                                  STANDARD;
01, CREATED)
32, LAST SEQUENCE UPDATE)
                                                                                                                                                                                                                      26.2%;
62.7%;
                                                                                                                                                                                                                                                                           169
77
92
130
108
110
120
                                                                                                                                                                                                                                                       17865
                                                                                                                                                                                                                                                       X.
                                                                                                                                                                                                                                                             LUTROPIN/CHORIOGONADOTROPIN BETA CHAIN.
BY SIMILARITY.
                                                                                                                                                                                                           Score 613; I
Pred. No. 5.1
22; Mismatch
                                  PRT;
                                                                                                                                                                                                                                                       9AB1CAA3
                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B.D.;
                                  141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JR.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VAN
                                                                                                                                                                                                                      DB 1; L
.13e-116;
                                                                                                                                                                                                                                                       CRC32;
                                                                                                                                                                                                                                                                                                                                                                                     --
                                ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEDEM G.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                D.N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WARD D.N.;
                                                                                                                                                                                                                              Length 169;
                                                                                                                                                                                                           Indels
                                                                                                                                                                                                         51
                                                                                                                                                                                                         Gaps
                                                                                                                                                                 228
                                                                                                                                                                                     86
                                                                                                                                                                                                         4;
```

```
Query Match
Best Local S
Matches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OVIS ARIES EUKARYOTA;
                                              CONFLICT
CONFLICT
                                                                         CONFLICT
                                                                                                                                                                 DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                             PROSITE;
PROSITE;
HORMONE;
                                                                                           CONFLICT
                                                                                                                                                                                                                                                        WEISSHAAR G., HIYAMA J., RENWICK A.G.C.;
EUR. J. BIOCHEM. 192:741-751(1990).
-I- FÜNCTION: PROMOTES SPERMATOGENESIS AND OVULATION BY STIMULATING
THE TESTES AND OVARIES TO SYNTHESIZE STEROIDS.
-I- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA
CCHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,
LUTROPIN, FOLLITROPIN AND GONADOTROPIN.
EMBL; S64695; 6408241; -.
EMBL; S64695; 6408241; -.
EMBL; S64695; 6408241; -.
                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 21-139.
MEDLINE; 73190035.
SAIRAM M.R., SAMY T.S.A.,
ARCH. BIOCHEM. BIOPHYS. 1
                                     SEQUENCE
                                                                                                           VARIANT
                                                                                                                    CARBOHYD
                                                                                                                               MODI
                                                                                                                                                                                            CHAIN
                                                                                                                                                                                                                                       PIR; A01500; UTSHB.
PIR; S09232; S09232.
HSSP; P01233; 1HCN.
                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 21-139.
MEDLINE; 72211145.
LIU W.-K., NAHM H.S., SWEENEY C.M.,
J. BIOL. CHEM. 247:4365-4381(1972).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. MEDLINE; 93351742.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
LUTROPIN BETA CHAIN PRECURSOR (LUTEINIZING HORMONE) (LSH-B) (LH-B).
                                                                                                                                        DISULFID
                                                                                                                                                DISULFID
                                                                                                                                                          DISULFID
                                                                                                                                                                                                      SIGNAL
                                                                                                                                                                                                                                                                                                                                                  STRUCTURE OF CARBOHYDRATE, MEDLINE; 91006170.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               D'ANGELO-BERNARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BROWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      D'ANGELO-BERNARD G., MOUMNI M., JUTISZ NUCLEIC ACIDS RES. 18:2175-2175(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE; 90245669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EUTHERIA; ARTIODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FISSUE-PITUITARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P., MCNEILLY J.R., CELL. ENDOCRINOL. 9:
 Similarity
71; Conser
                                                                                                                                                                                                                     PS00261; GLYCO_HORMONE_BETA_1; PS00689; GLYCO_HORMONE_BETA_2;
                                                                                                                                                                                                             SIGNAL;
                                   (SHEEP).
METAZOA; CHORDATA;
25.7%;
larity 64.0%;
Conservative
                                  GLYCOPROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93:157-165(1993).
                                                                                                                                                                                                                                                                                                                                                                            ., PAPKOFF H., LI (
153:572-586(1972).
                                     ¥.
                                          MISSING (IN SOME MO
Q -> E (IN REF. 1)
L -> P (IN REF. 1)
R -> Q (IN REF. 2)
PM -> PPM (IN REF. 2)
PM -> PG (IN REF. 4)
GP -> PG (IN REF. 3)
Score 602; DB 1; I
Pred. No. 2.36e-113;
22; Mismatches 18;
                                                                                                                                    LUTROPIN BETA (
BY SIMILARITY,
                                                                                                                              BLOCKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERTEBRATA; TETRAPODA;
                                    BA2C0204
                                                                                                                                                                                                                                                                                                                                                                                                                                  HOLCOMB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             :
                                    CRC32;
                                                                                                                                                                                                                                                                                                                                                                                    C.H.;
                                                                                                                                                                                            CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNIS
                                                               . 2).
F. 4).
                                                                                                                                                                                                                                                                                                                                                                                                                                  G. N. ,
                                            3 AND 4).
                                                                                                            MOLECULES).
                  Length 141;
                                                                                                                                                                                                                                                                                                                                                                                                                                  WARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              æ
::
Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLARK A.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                  D.2.
                                                                                                                                                                                                                                                                                                                       STIMULATING
0
Gaps
0
```

δ B

27 169

86

87

137

```
밁
                             Š
                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
S
                                                            Query Match
Best Local S
Matches 7
                                                                                            CONFLICT
CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                           PROSITE;
PROSITE;
PROSITE;
SIGNAL
CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LSHB_PIG
P01232;
                                                                                                                                            CARBOHYD
MOD_RES
VARIANT
                                                                                                                                                                                                                                                         LUTROPIN, FOLLITROPIN AND GONADOTROPIN.
EMBL; D00579; G217694; -.
PIR; A30322; UTPGB.
PIR; A48170; A48170.
HSSP; P01233; 1HCN.
                                                                                                                                                                                                                                                                                                                                                                                                    [2]
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                             MOL.
                                                                                                                                                                                                                                                                                                                                                                                    KATO
                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
MEDLINE; 91063934.
EZASHI T., HIRAI T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-JUL-1986 (REL.
01-NOV-1990 (REL.
01-OCT-1996 (REL.
                                                                                                                                    CONFLICT
                                                                                                                                                                                                                                                                                                                                   MAGHUIN-ROGISTER G., HENNEN G.;
EUR. J. BIOCHEM. 39:235-253(1973)
                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 21-139. MEDLINE; 74075724.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            EUKARYOTA;
EUTHERIA; !
                                                                                                                                                                     DISULFID
                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LUTROPIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    229
 229
                                169
                87
                                                27
                                                                                                                                                                                                                                                                                                   FUNCTION: PROMOTES SPERMATOGENESIS AND OVULATION BY STIMUL THE TESTES AND OVARIES TO SYMPHESIZE STEROIDS. SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SCROFA (PIG)
                            IRLPGCPPGVDPTVSFPVALSCHCGPCRLSSSDCGGPRAQPLACDRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQD 279
IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDP
                                                            h 25.5%;
Similarity 66.4%;
71; Conservative
                                                                                                                                                                                                                                                                                                                                                                                   E FROM N.A.; 89306142.
                                                                                                                                                                                                                                                                                                                                                                                                                    ENDOCRINOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BETA
                                                                                                                                                                                                                                      SIGNAL;
                                                                                                                                                                                                                                          PS00261; GLYCO_HORMONE_BETA_1; PS00689; GLYCO_HORMONE_BETA_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ARTIODACTYLA
                                                                                                                                                                                                                                                                                                                                                                            ENDOCRINOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     METAZOA;
                                                                                                    113
33
21
30
40
62
62
83
87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2L. 16, LA
2EL. 34, T
A CHAIN P
                                                                                                                                                                            54
54
54
54
54
                                                                                             ΑĄ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                     GLYCOPROTEIN.
                                                                                                    1, CREATED)
6, LAST SEQUENCE UPDATE)
4, LAST ANNOTATION UPDATE)
PRECURSOR (LUTEINIZING HORMONE)
                                                                                                                                                                                                                                                                                                                                                                                                                    5:137-146(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHORDATA;
                                                                                             14889
                                                                                                                                                                                                                                                                                                                                                                            62:47-53(1989).
                                                                                            MW;
                                                            Score
Pred.
19; M
                                                                                                                                                                  LUTROPIN BETA C
BY SIMILARITY.
                                                                                                   BLOCKED.

R -> Z.

N -> D (

V -> R (

S -> I (

I -> S (
                                                                                          N -> D (IN REF. 3)
V -> R (IN REF. 3)
S -> I (IN REF. 3)
I -> S (IN REF. 3)
GP -> PG (IN REF. 3)
DAZEF539 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERTEBRATA;
                                                            e 598; DB 1; Lv
. No. 2.19e-112;
Mismatches 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    141
                                                                                                                                                                                                                                            --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₽
                                                                                                   (EF. 3).
(EF. 3).
(EF. 3).
(EF. 3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                   CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                           KATO Y.
                                                                           Length 141;
                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (LSH-B)
                133
                                                                                                                                                                                                                                                                                                                           BY STIMULATING
275
                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (LH-B).
                                                            Gaps
                                              86
                                                             0
```

:

(REL. (REL. (REL.

27, 27, 34,

CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)

```
RESULT
ID LE
AC P
DT 0
                                                                          QΥ
                                                                                           ĝ
                                                                                                            Ş
                                                                                                                                В
                                                                                                                                                                                          RESULT
                                                                                                                                                   Query Match
Best Local S
Matches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LSHB_RAT STAN

P01230;

21-JUL-1986 (REL. C

21-JUL-1986 (REL. C

01-OCT-1996 (REL. 3
LT 15
LSHB_BALAC
P33088;
01-OCT-1993
01-OCT-1993
01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JAMESON L., CHEM. 7
                                                                                                                                                                                                   DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
                                                                                                                                                                                                                                                                                        PROSITE; HORMONE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE; 83
CHIN W.W.,
                                                                                                                                                                                                                                                                      CHAIN
                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                SIGNAL
                                                                                                                                                                                                                                                                                                PROSITE; PS00261; GLYCO_HORMONE_BETA_1; PROSITE; PS00689; GLYCO_HORMONE_BETA_2;
                                                                                                                                                                                                                                                                                                                              PIR; A01498; UTRTB. PIR; S42527; S42527.
                                                                                                                                                                                                                                                                                                                                                 LUTROPIN, FOLLITROPIN AND GONADOTROPIN.
EMBL; V01542; 6758262; -.
EMBL; J00749; G205176; -.
EMBL; D00576; G220808; -.
                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN-WISTAR-IMAMICHI; TISSUE-ANTERIOR KATO Y., EZASHI T., HIRAI T., KATO T.; ZOOL. SCI 7:877-885(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 4-141 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN-SPRAGUE-DAWLEY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RATTUS NORVEGICUS (RAT)
EUKARYOTA; METAZOA; CHC
                                                                                                                                                                                                                                                                                                                                                                                                  ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROC. NATL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HABENER J.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EUTHERIA; RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LUTROPIN
                                                                            229
                                                                                                              169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EQUENCE FROM N.
                                                                                           87
                                                                                                                                27
                                                                                                                                                                                                                                                                                                                                                                                 SUBUNIT: HETERODIMER OF A CUMPIC CHAIN WHICH CONFERS BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                      FUNCTION: PROMOTÉS SPÉRMATOGENESIS AND OVULATION BY STIMUL THE TESTES AND OVARIES TO SYMPHESIZE STEADLS. SUBUNIT: HETERODIMER OF A COMMON ALPHA STRADIAN AND A UNIQUE CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14
                                                                         PLCRPVNATLAAENEFCPVCITFTTSICAGYCPSMVRVLPAALPPVPQPVCTYRELRFAS 86
                                                                                                             PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES
                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          85080043.
L., CHIN W.W., HOLLENBERG A.N.,
CHEM. 259:15474-15480(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83273673.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  996 (REL. 34, LAST ANNOTATION UPDATE)
BETA CHAIN PRECURSOR (LUTEINIZING HO
                                                                                                                                                                                                                                                                                          SIGNAL;
                                                                                                                                                                                          141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACAD.
                                                                                                                                                   Conservative
                                                                                                                                                                                                                       544321
58463
                                                                                                                                                                                                                                                                                                                      1HCN.
                                                                                                                                                                                          A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                      STANDARD;
                                                                                                                                                                                                                                                                                         GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SCI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01, CREATED)
01, LAST SEQUENCE UPDATE)
34, LAST ANNOTATION UPDAT
                                                                                                                                                                                                   20
141
77
77
92
130
108
110
120
                                                                                                                                                            25.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHORDATA;
                                                                                                                                                                                          15177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KLEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .S.A.
                                                                                                                                                                                          Œ,
                                                                                                                                                                                                  LUTROPIN BETA CHAIN.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
PROBABLE.
                                                                                                                                                 Score 597; DB 1; L
Pred. No. 3.82e-112;
23; Mismatches 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERTEBRATA;
                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80:4649-4653(1983)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                          6E0C19BA CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHANG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    141
                                      118
                                                                                                                                                                                                                                                                                                                                                                                                                                                PITUITARY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHANG A.S.,
                                     ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HORMONE)
                                                                                                                                                                     Length 141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAN
                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (LSH-B) (LH-B).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HABENER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          :.K:,
                                                                                                                                                                                                                                                                                                                                                                                                                    STIMULATING
                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J.F.;
                                                                                                                                                   Gaps
                                                                                                                                                   0
```

```
Search completed: Wed May Job time: 19 secs.
                                                                                                                                                                                               Query Match 25.4%;
Best Local Similarity 60.6%;
Matches 66; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE.

SEQUENCE.

SEQUENCE.

SEQUENCE.

SARASEV V.S., PANKOV Y.A.;

BIOKHIMIA 50:1972-1986(1985).

FINE TOTAL 50:1972-1986(1985).

FINE TESTES AND OVARIES TO SYNTHESIZE STEROIDS.

FOR THE TESTES AND OVARIES TO SYNTHESIZE STEROIDS.

FOR THE TESTES AND OVARIES TO SYNTHESIZE STEROIDS.

CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, LUTROPIN, FOLLITROPIN AND GONADOTROPIN.

PIR; PN0139; PN0139.

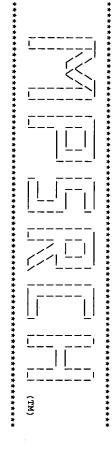
HSSP; P01233; 1HCN.

FOR THYROTROPIN AND GONADOTROPIN.
                                                                                                                                                                                                                                                              PROSITE;
HORMONE;
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BALAENOPTERA ACUTOROSTRATA (MINKE WHALE) (LESSER RORQUAL).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; CETACEA.
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LUTROPIN BETA CHAIN (LUTEINIZING HORMONE) (LSH-B) (LH-B).
LHB.
                                                             169
                                                                                                                           PS00261; GLYCO_HORMONE_BETA_1; 1.
PS00689; GLYCO_HORMONE_BETA_2; FALSE_NEG.
                                                                                                                                                                                                                                                              9
23
26
34
38
38
38
38
11
13
                                                                                                                                                                                                                                                                12414 MW;
                  σ
                  08:53:30 1998
                                                                                                                                                                                              Score 595; DB 1; Length 118; Pred. No. 1.16e-111; 25; Mismatches 17; Indels
                                                                                                                                                                                                                                                                                             BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                DE251ECF CRC32;
                                                                                                                                                                                               1;
                                                                                                                                                                                               Gaps
                                                                                                                                                                                               Ļ
```

밁

Š 밁

Ş



Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm Run on: Wed May 6 08:53:48 1998; MasPar time 15.81 Seconds 817.861 Million cell updates/sec

Title: >US-08-804-166-4
Description: (1-307) from US08804166.pep
Perfect Score: 2341
Sequence: 1 SRTSLLLAFGLLCLPWLQEG.......PSLPSPSRLPGPSDTPILPQ 307

Tabular output not generated.

Scoring table: PAM 150 Gap 11

140555 segs, 42109429 residues

Post-processing: Minimum Match 0% Listing first 45 summaries Searched:

Database: sptremb15
1:sp\_fung1 2:sp\_human 3:sp\_invertebrate 4:sp\_mammal
5:sp\_mhc 6:sp\_organelle 7:sp\_phage 8:sp\_plant
9:sp\_bacteria 10:sp\_rodent 11:sp\_virus 12:sp\_vertebrate
13:sp\_unclassified

Statistics: Mean 42.863; Variance 77.650; scale 0.552

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

219876544321 11006544321 11006544321 11006544321	Result
1024 9426 895 596 596 597 430 331 331 311 311 311 311 311 311 311 3	Score
443.7 25.449.47 113.7 112.69.33.47	Query Match I
145 1865 1871 1871 1871 1871 1871 1871 1881 188	Length DB
	B
013991 025185 0219131 0019131 0019131 0062778 062844 060844 0608844 06088123 091121 091225 0130525 013052 013052 013052 013052	
BETA-GONADOTROPIN. CHORIONIC GONADOTROPIN TUMOUR NECROSIS FACTOR- LUTEINIZING HORMONE BE TESTICULAR LUTEINIZING LUTEINIZING HORMONE BE GONADOTROPIN II BETA S GONADOTROPIN BETA-SUBUN GONADOTROPIN BETA-SUBUN GONADOTROPIN BETA-SUBUN GONADOTROPIN BETA-SUBUN THYROTROPIN BETA-SUBUN	Description
ROPIN. ROPIN MADOTROPIN SIS FACTOR IS FACTOR- IS FACTOR- IS FACTOR- IN ETA S IN ETA S BETA SUBUN I BETA SUBUN	
1.26e-200 1.78e-180 1.78e-190 1.78e-190 2.5.05e-171 2.64e-103 3.27e-100 9.70e-50 3.27e-50 3.27e-50 3.27e-50 3.27e-50 3.27e-41 3.27e-31 3.27e-3	Pred. No.

45	44	43	42	41	40	39	38	37	ω 6	<b>3</b> 5	34	33	32	31	30	29	28	27	26	25	24	23	22	1.7
163	163	163	163	163	167	167	179	178	180	180	182	187	206	205	210	210	214	214	214	248	248	248	253	600
7.0	7.0			7.0		7.1	7.6	7.6	7.7	7.7	7.8	8.0	8.8	8.8	9.0	9.0	9.1		•	10.6		٠		٠
440	440	411	411	411	217	202	425	324	299	283	259	267	459					349	348	418	380	253	426	111
N	N	N	N	N	2	N	N	10	N	N	N	4	10	10	11	N	11	11	11	N	N	N	N	١
014763	015531	015517	015508	014720	Q16631	Q14405	Q16042	Q63199	014798	Q92956	014755	002764	Q62327	Q63012	Q85308	Q15962	089118	860680	Q85407	000275	000280	000276	014865	CHACCC
	APOPTOSIS INDUCING PRO	CYTOTOXIC TRAIL RECEPT	P53-REGULATED DNA DAMA	DEATH RECEPTOR 5.	SOMATOTROPIN PRECURSOR	SOMATOTROPIN PRECURSOR	TUMOR NECROSIS FACTOR	FAS ANTIGEN PRECURSOR.	CYTOTOXIC TRAIL RECEPT	HERPESVIRUS ENTRY MEDI		OX40 PRECURSOR (FRAGME	TUMOR NECROSIS FACTOR	TESTICULAR LUTEINIZING	SECRETED RECEPTOR BIND	THYROTROPIN BETA SUBUN	SOMALIA-1977 RIGHT NEA	σ	HOMOLOG OF VACCINIA VI	LYMPHOCYTE ASSOCIATED	LYMPHOCYTE ASSOCIATED	LYMPHOCYTE ASSOCIATED	DEATH RECEPTOR 3 BETA.	OCHORDE CENTS SECRETOR
.38e-	3.38e-12	.38e-	.38e-	3.38e-12		.39e-	4.00e-15	.13e-	.61e-	.61e-	.11e-	1.29e-16	.13e-	.88e-			.90e-2	.90e-2	.90e-	1.72e-28	2e-2	1.72e-28	1.71e-29	T./10.43

## ALIGNMENTS

```
₽
                                  Ş
                                                          밁
                                                                              ş
                                                                                                          밁
                                                                                                                              Š
                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOR RANGOCO SE
RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
                                                                                                                                                                                Query Match
Best Local S
Matches 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                      Q95185;
01-FEB-1997 (TREMBLREL. 02, CREATED)
01-FEB-1997 (TREMBLREL. 02, LAST SEQUENCE UPDATE)
01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
THMOUR NECROSIS FACTOR RECEPTOR P60 (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J. BIOL. CREM: G180444; -...
EMBL; K03183; G180444; JOINED.
EMBL; K03182; G180444; JOINED.
EMBL; K03182; G180444; JOINED.
165 AA; 17729 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CT 3
Q95185
                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.

DUTHIE S., NASIR L., ECKERSALL P.D.;

SUBMITTED (CCT-1996) TO EMBL/GENBANK/DDBJ

EMBL; U72344; G1613880; -.

EROSITE; PS00652; TNFR_NGFR_1; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHORIONIC CGB.
                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                             NON_TER
                                                                                                                                                                                                                                                                                                                                                  FELIS SILVESTRIS CATUS (CAT).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BOIME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POLICASTRO P., OVITT C.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
MEDLINE; 84008141.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EUKARYOTA; METAZOA
EUTHERIA; PRIMATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HOMO SAPIENS (HUMAN)
EUKARYOTA; METAZOA;
                                                                                                                                                                                                                                                                                                                                          EUTHERIA; CARNIVORA
                                   146
                                                          165
                                                                                                          105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                289
                                                                                  86
                                                                                                                                  26
                                                                                                                                                          45
                                                                                                                                                                                          Match 40.4%;
Local Similarity 86.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27
                                                                                                                                         CPQGKYIHPQDNSICCTKCHKGTYLYNDCAGPGLDTDCRECENGTFTASENYLRQCLSCS 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 86
                                                          TVCTCHAGFFLRGNEC 180
                                                                                          KCRKEMYQVEISPCTYYRDTYCGCRKNQYRYYWSETHFQCLNCSLCLNGTYQISCKETQN 164
                                                                                                                             CPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSCS 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 228
                                  TVCTCHAGFFLRENEC
                                                                               KCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQN 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SLPSPSRLPGPSDTPILPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SLPSPSRLPGPSDTPILPQ 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQASSSSKAPPP 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       h 43.7%;
Similarity 99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHEM. 258:11492-11499(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GONADOTROPIN
                                                                                                                                                                                                                               180
180 AA;
                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                              180
20399 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               307
                                                                                                                                                                              Score 945; DB 4; L
Pred. No. 1.78e-182;
9; Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HOSHINA M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 1024; DB 2; I
Pred. No. 1.26e-200;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBUNIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                               5452A6B2 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B1CAA0B1 CRC32;
                                                                                                                                                                               Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FUKUOKA H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₹
                                                                                                                                                                                                                                                                                          DATA BANKS
                                                                                                                                                                                                                                                                                                                                                    TETRAPODA; MAMMALIA;
                                                                                                                                                                                                      Length 180;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BOOTHBY M.R.,
                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                               Gaps
                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
Ş
                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SORRE RESERVED TO THE RESERVED
                                                                                                                                                                                                                                                                                                              SO DE PRESENTATION OF THE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ĥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 38.2%;
Best Local Similarity 73.2%;
Matches 104; Conservative
                                                                                                                                                           Matches
                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           O19102;
O1-JAN-1998 (TREMBLREL. 05, CREATED)
O1-JAN-1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)
O1-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
O1-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
LUTEINIZING HORMONE BETA SUBUNIT (FRAGMENT).
CERATOTHERIUM SIMUM (WHITE RHINOCEROS) (SQUARE-LIPPED EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; M
                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
TISSUE-PITUITARY GLAND;
SHERMAN G.B., LUND L.A.;
SUBMITTED (SEP-1996) TO EMBL/GENBANK/DDBJ
EMBL; U72659; G2462779; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O19102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LEE E.-K., TALYOR M.J., KEHRLI M.E.;
SUBMITTED (AUG-1997) TO EMBL/GENBANK/DDBJ
EMBL; U90937; G2290398; -
PROSITE; PS00652; TMFR_NGFR_1; 3.
SEQUENCE 471 AA; 51368 MW; 1D60FF4A CR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-PITUITARY GLAND;
MEDLINE; 97449288.
SHERMAN G.B., LUND L.A.,
GENE 195:131-139(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BOS TAURUS (BOVINE).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; ARTIODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      019131;
01-JAN-1998 (TREMBLREL. 05, CREATED)
01-JAN-1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)
01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                019131
                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EUTHERIA; PERISSODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TNF-R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TUMOR NECROSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-AORTA;
       169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101
                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23
RODTICHCHMGFFLKGAKCISC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SCSRCRDEMFQVEISPCVVDRDTVCGCRKNQYREYMGETGFRCLNCSLCPNGTVNIPCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ESPCPQGKYNHPQNSTICCTKCHKGTYLYNDCPGPGRDTDCRVCAPGTYTALENHLRRCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KONTVCTCHAGFFLRENECVSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                       135 AA;
                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FACTOR-RECEPTOR I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                           14212 MW;
                                                                                                                                                                                          25.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BUNICK
                                                                                                                                                   Score 596; DB 4; I
Pred. No. 2.46e-103;
20; Mismatches 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 895; DB 4; Le
Pred. No. 5.05e-171;
21; Mismatches 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3.
1D60FF4A CRC32;
                                                                                                                                                                                                                                                                                                           F4F196D2 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WINN R.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₿
                                                                                                                                                                                                                                                                                                                                                                                                                           DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DATA
                                                                                                                                                       16;
                                                                                                                                                                                                                                                                                                                                                                                                                           BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BANKS
                                                                                                                                                                                                                             Length 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          471;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RHINOCEROS).
                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                   Gaps
                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

81

IRLPGCPPGVDPMVSFPVALSCRCGPCRLSSSDCGGPRAQPLACDRP

```
RESULT
ID Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                  SO DE RACE OCC OS DE RACE OCC OCC DE RACE DE R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
  RESULT 8
ID Q98849
                                                                                       ş
                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 6
ID Q62778
                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 68; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q60844;
01-WOV-1996 (TREMBLREL. 01
01-NOV-1996 (TREMBLREL. 01
01-JAN-1998 (TREMBLREL. 05
LUTEINIZING HORMONE BETA (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q62778;
01-NOV-1996
01-NOV-1996
01-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q60844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZHANG F.P., RANNIKKO A., HUHTANIEMI I.;
BIOCHEM. BIOPHYS. RES. COMMUN. 210:858-865(1995).
EMBL; U25653; G915217; -
                                                                                                                                                                                                                                                                                                                                                                                  KAPUR V., MATZUK M.M.;
SUBMITTED (AUG-1995) TO EMBL/GENBANK/DDBJ DATA BANKS.
EMBL; U25145; G930345; -.
MGD; MGI:96782; LHB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RATTUS NORVEGICUS (RAT).
EUKARYOTA; METAZOA; CHOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-NOV-1996 (TREMBLREL.
01-NOV-1996 (TREMBLREL.
01-NOV-1996 (TREMBLREL.
TESTICULAR LUTEINIZING)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. STRAIN=129 SVEV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN-SPRAQUE DAWLEY; MEDLINE; 95283549.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EUTHERIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EUKARYOTA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MUS MUSCULUS (MOUSE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EUTHERIA;
                                                                                         229
                                                                                                                                                                                 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              229
                                                                                                                                    87
                                                                                                                                                                                                                             27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VRLPGCPPGVDFIVSFPVALSCRCGPCRLSSSDCGGPRTQPMACDLPHL 135:|||||| ||:||:||| |::|| |::|| |::
                                                                                                                                                                                                      PLCRPVNATLAAENEFCPVCITFTTSICAGYCPSMVRVLPAALPPVPQPVCTYRELAFAS 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDP
                                                                                         IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRF
                                                                                                                                                                              PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RODENTIA.
                                                                                                                                                                                                                                                                                                                                                               141 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25.4%;
larity 63.3%;
Conservative
                                                                                                                                                                                                                                                                      24.98;
larity 62.48;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHORDATA; VERTEBRATA; TETRAPODA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14880 MW;
                                                                                                                                                                                                                                                                                                                                                               15028 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HORMONE BETA-SUBUNIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01, CREATED)
01, LAST SEQUENCE UPDATE)
05, LAST ANNOTATION UPDATE)
a (LUTENIZING HORMONE BETA-SUBUNIT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CREATED)
LAST SEQUENCE UF
LAST ANNOTATION
                                                                                                                                                                                                                                                                   Score 582; DB 10;
Pred. No. 3.27e-100;
24; Mismatches 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 595; DB 10;
Pred. No. 4.12e-103;
24; Mismatches 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                               BE50AB2B CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5B2E7DBF CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    139
  140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ⋛
  ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     UPDATE)
                                                                                                                                                                                                                                                                                                                Length 141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              275
                                                                                         277
                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
ID Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TW REAL RANGE OF THE RA
  DI DI A
                                                                                                                                                                            Š
                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      윰
                                                                                       IJ
                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q98849;
Q1-FEB-1997 (TREMBLREL. 02, CREATED)
Q1-FEB-1997 (TREMBLREL. 02, LAST SEQUENCE UPDATE)
Q1-FEB-1997 (TREMBLREL. 02, LAST ANNOTATION UPDAT
GONADOTROPIN II BETA SUBUNIT PRECURSOR.
CARASSIUS AUGATUS (GOLDPISH).
EUKARYOTA, METAZOA: CHORDATA; VERTEBRATA; PISCES;
OSTEICHTHYES; ACTINOPTERYGII; CYPRINIFORMES.
Q91121;
01-NOV-1996
01-NOV-1996
                                                                                       LT 10
Q91121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CT 9
Q63013
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZHANG F.P., RANNIKKO A., HUHTAN
BIOCHEM. BIOPHYS. RES. COMMUN.
EMBL; UZ5803; G904026;
SEQUENCE 80 AA; 8515 MW; 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN-SPRAQUE DAWLEY;
MEDLINE; 95283549.
ZHANG F.P., RANNIKKO A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-NOV-1996 (TREMBLREL.
01-NOV-1996 (TREMBLREL.
01-NOV-1996 (TREMBLREL.
TESTICULAR LUTEINIZING F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q63013;
01-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE-PITUITARY GLAND;
YOSHIURA Y., KOBAYASHI M., KATO Y., AIDA K.;
SUBMITTED (OCT-1996) TO EMBL/GENBANK/DDBJ DATA BANKS
EMBL; D88024; G1644243; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RATTUS NORVEGICUS (RAT).
EUKARYOTA; METAZOA; CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EUTHERIA;
                                                                                                                                                                                 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         169
                                                                                                                                                                                                                                                                        203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18.4%;
Local Similarity 50.0%;
les 54; Conserva+4...
                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27
                                                                                                                                                                                                                                                                                                  VRLPDCPPGVDPHITYPVALSCDCSLCTMDTSDCTIESLQPDFCMSQR 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPCEPVNETVAVEKEGCPKCLVLQTTICSGHCLTKEPVYKSPFSTVYQHVCTYRDVRYET
                                                                                                                                                                              GGPKDHPLTCDDPRF
                                                                                                                                                                                                                      GGPRTQPMTCDLPHL
                                                                                                                                                                                                                                                                        MTRVLQGVLPALPQVVCNYRDVRFESIRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES
                                                                                                                                                                                                                                                                                                                                                             Similarity
45; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        140 AA;
                                                                                                                                                                                                                                                                                                                                                        16.7%;
larity 60.0%;
Conservative
(TREMBLREL.
                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23
140
15533
                                                                                                                                                                                 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HORMONE BETA SUBUNIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01, CREATED)
01, LAST SEQUENCE UPDATE)
01, LAST ANNOTATION UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HUHTANIEMI I.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MW;
  CREATED)
                                                                                                                                                                                                                                                                                                                                                             Score 391; DB 10;
Pred. No. 2.54e-58;
18; Mismatches 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 430; DB 12;
Pred. No. 9.70e-67;
22; Mismatches 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       74FA772D CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        POTENTIAL.
GONADOTROPIN II BETA SUBUNIT.
; 7205FD03 CRC32;
                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERTEBRATA; TETRAPODA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   210:858-865(1995).
  SEQUENCE UPDATE)
                                                                                       147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        80
                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PISCES; GNATHOSTOMATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 140;
                                                                                                                                                                                                                                                                                                                                                                                                          Length 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                             ۲,
                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
```

86 228

0,

jie Lim

;;

```
RCCSETTTA
                                                                                                                        RESULT 12
ID 013050
                                                                                                                                                                          Ş
                                                                                                                                                                                                 밁
                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STINE REPORT
                                                                                                                                                                                                                                                  몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                     Query Match
Best Local s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                            Matches
                       O13050;
01-JUL-1997 (TREMBLREL. 04, CREATED)
01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
01-JUL-1997 (TREMBLREL. 04, LAST ANNOTATION UPDATE)
01-JUL-1997 (TREMBLEEL 04, LAST ANNOTATION UPDATE
GONADOTROPIN I BETA SUBUNIT PRECURSOR.
CYPRINUS CARPIO (COMMON CARP).
CYPRINUS CARPIO (COMMON CARP).
EUKARYOTA; METAZOA; CHORDATA; OSTEICHTHYES; ACTINOPTERYGII; [1]
                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
TSAI H.J., YANG L.T.;
SUBMITTED (JAN-1994) TEMBL; L11722; G437308;
                                                                                                                                                                                                                                                                                                                                                                                           ACANTHOPAGRUS LATUS.

BUKARYOTA; ANIMALIA; METAZOA;

ACTINOPTERYGII; PERCIFORMES;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q90225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-NOV-1996 (TREMBLREL. 01, LAST ANNOTATION GONADOTROPIN II BETA SUBUNIT PRECURSOR. MORONE SAKATILIS (STRIPED BASS) EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; OSTEICHTHYES; ACTINOPTERYGII; PERCIFORMES
                                                                                                                                                                                                                                                                                                                                                                                                                                               01-NOY-1996 (TREMBLREL. 01, CREATED)
01-NOY-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
01-NOY-1996 (TREMBLREL. 01, LAST ANNOTATION UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q90225;
01-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HASSIN S., ELIZUR A., ZOHAR Y.;
J. MOL. ENDOCRINOL. 15:23-35(19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                      GONADOTROPIN BETA-SUBUNIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE; 96020549.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE-PITUITARY
                                                                                                                                                                           229
                                                                                                                                                                                                                           169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 36 PPCQLINQTVSLEKEGCPKCHPVETTICSGHCITKDPVIKIPFSNVYQHVCTYRDLHYKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                    FELPDCPLGVDFTVTYPVAVSCNCGLCAMDISDCTFESLQPNFCMNDIPF
                                                                                                                                                                                                                                        PPCQLINQTVSLEKEGCPKCHPVETTICSGHCITKDPVMKTRY-VYQHV-CTYRDLHYKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTC-DDPRF
                                                                                                                                                                        PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            L35096; G598255; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            h 15.4%;
Similarity 44.5%;
49; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1
33
147
                                                                                                                                                                                                                                                                                                                         137 AA;
                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₹
                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GLAND;
                                                                                                                                                                                                                                                                                     15.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        32
147
                                                                                                                                                                                                                                                                                                                          15330 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15:23-35(1995)
                                                                                                                                                                                                                                                                                                                                                TO EMBL/GENBANK/DDBJ DATA BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MW.
                                                                                                                                                                                                                                                                       Score 353; DB 12;
Pred. No. 3.27e-50
22; Mismatches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 361; DB 12; I
Pred. No. 6.54e-52;
24; Mismatches 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LAST ANNOTATION UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POTENTIAL.
GONADOTROPIN II BETA SUBUNIT; 292F2F62 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                CHORDATA;
PERCOIDEI;
              CYPRINIFORMES
                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                          F87577B5 CRC32;
                                                                                                                                                                                                                                                                         Mismatches 36;
                                                                                                                        130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             137
                                                                                                                                                                                                                                                                                                                                                                                                VERTEBRATA; OSTEICHTHYES, SPARIDAE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ⋧
                                                                                                                        ₿
                        PISCES; GNATHOSTOMATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PISCES; GNATHOSTOMATA;
                                                           UPDATE)
                                                                                                                                                                                                                                                                                              Length 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 147;
                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    145
                                                                                                                                                                                                                                                                        ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ۲,
                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                       228
                                                                                                                                                                                                                                               85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                                                                         ω
```

`\*

```
FT RRC PROCES
                                                                                                                                                                                                 RESULT
ID Q9
                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                      ₽
                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                         S D R R R R R R C C C S D D D D A C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 13
ID P79357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                        O1-FEB-1997 (TREMBLREL 02, CRE
O1-FEB-1997 (TREMBLEL 02, LAS
O1-FEB-1997 (TREMBLEL 02, LAS
O1-FEB-1997 (TREMBLEL 02), LAS
GONADOTROPIN I BETA SUBUNIT PRE
CARASSIUS AURATUS (GOLDFISH).
EUKARYOTA; METAZOA; CHORDATA;
OSTEICHTHYES; ACTINOPTERYGII; C
                                                                                                                                      Q98848;
01-FEB-1997
01-FEB-1997
01-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAY-1997
01-MAY-1997
01-MAY-1997
                                                                                                                                                                                                  LT 14
Q98848
          EMBL; DI
SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIGNAL
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.

KOBAYASHI M., IMASAKI M., KONDO H., YOSHIQ
SUBMITTED (MAY-1997) TO EMBL/GENBANK/DDBJ
EMBL; AB003583; D1020895; -.
                                TISSUE-PITUITARY GLAND;
YOSHIURA Y., KOBAYASHI M
SUBMITTED (OCT-1996) TO
                                                                                                                                                                                                                                                                                                                                                                                      KANIA S.A., FRANK L.A., ODOM T.F.;
SUBMITTED (FEB-1997) TO EMBL/GENBANK/DDBJ DATA
EMBL; U89294; G1872550; -
SEQUENCE 138 AA; 15571 MW; 332E4E82 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
TISSUE-PITUITARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LAMA GLAMA (LLAMA).
EUKARYOTA; METAZOA; CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAY-1997 (TREMBLREL.
01-MAY-1997 (TREMBLREL.
01-MAY-1997 (TREMBLREL.
THYROTROPIN BETA CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P79357;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIGNAL.
                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EUTHERIA; ARTIODACTYLA.
                                                                                                                                                                                                                                                218
                                                                                                                                                                                                                                                                                    162 VSCAGAGPRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQG-V-LP--ALPQV 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       171 CRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALP-QVVCNYRDVRFESI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          230 RLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCD 273
                                                                                                                                                                                                                                                           71 VCTYRDFMYKTVEIPGCPHHVTPYFSYPVAVSCKCGKCDTDYSDC
                                                                                                                                                                                                                                                                                                       85 EFKGCPARADSVFTYPVALSCECSKCNSDITDCGALSQQTLSCN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26 CRITNISITVESEECGSCITIDITACAGLCKTQESVYRSPL-MLSYQNTCNFREWTYETY
                                                                                                                                                                                                                                               VCNYRDVRFESIRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDC
                       D88023;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                          48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19
19
130 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13.7%;
larity 41.3%;
Conservative
                                                                                                                                                                                                                                                                                                                                          Conservative
                     G1644241;
                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18
130
14393
                                                                                                                                                                                                                                                                                                                                                     13.4%;
45.7%;
                                              X
                                                                                                                                      02, CREATED)
02, LAST SEQUENCE UPDATE)
02, LAST ANNOTATION UPDAT
                                #., KATO Y., AIDA !
EMBL/GENBANK/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ខ្លួន
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Œ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CREATED)
LAST SEQ
                                                                                                                           PRECURSOR
                                                                                                                                                                                                                                                                                                                                       Score 314; DB 4;
Pred. No. 5.23e-42;
22; Mismatches 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 321; DB 12;
Pred. No. 1.80e-43;
24; Mismatches 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POTENTIAL.
GONADOTROPIN I BETA
; 3D37E6B1 CRC32;
POTENTIAL.
                                                                                           VERTEBRATA; P
CYPRINIFORMES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERTEBRATA;
                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      H., YOSHIURA Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE UPDATE)
ANNOTATION UPDATE)
                                                                                                                                                                                                  130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             138
                                            7
                                                                                                                                                                                                  ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TETRAPODA; MAMMALIA;
                                  DATA
                                                                                                    PISCES;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DATA BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35;
                                                                                                                                                                                                                                                                                                                                          29;
                                BANKS
                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                              BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WATABE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUBUNIT
                                                                                                    GNATHOSTOMATA;
                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      :
:
                                                                                                                                                                                                                                                                                                                                         6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                  70
                                                                                                                                                                                                                                                                                                                                         ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ņ
```

```
Search completed: Wed May 6 08:55:06 1998 Job time: 78 secs.
                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SQ
                                                      Š
                                                                                  밁
                                                                                                                                      B
                                                                                                                                                                                                                         RESULT 15
ID Q16163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                              Query Match 13.3%; Score 311; DB 2; Length 138. Best Local Similarity 45.7%; Pred. No. 2.21e-41; Matches 48; Conservative 22; Mismatches 29; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 13.3%;
Best Local Similarity 40.4%;
Matches 42; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHAIN
SEQUENCE
                                                                                                                                                                                                                                                                                                                              Q16163;
Ol-NOV-1996 (TREMBLREL. O1, CREATED)
Ol-NOV-1996 (TREMBLREL. O1, LAST SEQUENCE UPDATE)
Ol-NOV-1996 (TREMBLREL. O1, LAST ANNOTATION UPDATE)
THYROID-STIMULATING HORMONE BETA SUBUNIT (FRAGMENT).
HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; PRIMATES.
                                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLINE; 94254248.
MIPON II I., KASAI N., HAYASHIZAKI Y.;
NIPPON RINSHO 52:940-947(1994).
EMBL; S70587; G546849; -.
NON_TER 138 138
SEQUENCE 138 AA; 15627 MW; 0539644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              85 EFKGCPARADSIFTYPVALSCECSKCNSDITDCGVLSQQTLGCN 128
: || :: :|:||||:: | || || :: | |:
230 RLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCD 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   218
                                                                      71 VCTYRDFIYRTVEIPGCPLHVAPYFSYPVALSCKCGKCNTDYSDC 115
                                                      19 1
130 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GONADOTROPIN I BETA SUBUNIT. 14422 MW; 3C222BFD CRC32;
                                                                                                                                                                                                                    138
15627 MW; 0539646F CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 312; DB 12; Length 130; Pred. No. 1.37e-41; 23; Mismatches 37; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          138 AA.
                                                                                                                                                                 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>ب</u>
                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'n
```

(OTTHE MIRALE STAR SIHT

* * * * *		* * * *
****		****
****		****
****		*****
***		*****
在我的我们的我们的我们的我们的我们的我们的我们的我们的,我们们的我们的我们的,我们们的我们的我们的我们的我们的我们的我们的我们的我们的我们的我们的我们的我们的		在各种的现在分词的现在分词 有有的的 的复数的 医克里克斯氏征 医克里克斯氏征 医克里克斯氏征 医克里克斯氏氏征 医克里克斯氏氏征 医克里克氏征 医克里克克氏征 医克里克克氏征 医克里克氏征 医克里克克氏征 医克里克克氏征 医克里克克氏征 医克里克氏征 医克里克克氏征 医克里克氏征 医克克氏征 医克里克氏征 医克里克氏征 医克里克氏征 医克克氏征 医克克克氏征 医克克氏征 医克克克氏征 医克克氏征 医克氏征 医
******		*****
****		****
****		****
***		****
***	'	****
****	(ME)	****

Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_nn n.a. - n.a. database search, using Smith-Waterman algorithm

Tabular output not generated. Run on: Wed May 6 13:40:53 1998; MasPar time 1173.41 Seconds 1494.904 Million cell updates/sec

Description:
Perfect Score:
N.A. Sequence:
Comp: >US-08-804-166-5 (1-1147) from US08804166.seq 1147

1 TCGAGATGGCTACAGGTAAG......AATCTTAAGGATCCCTCGAG 1147
AGCTCTACCGATGTCCATTC......TTAGAATTCCTAGGGAGCTC

Scoring table: TABLE default Gap 6

Nmatch STD : Dbase 0; Query 0

Searched: 436399 seqs, 764661465 bases x 2

Post-processing: Minimum Match 0% Listing first 45 summaries

Database:

emb153
1:em\_in 2:em\_or 3:em\_om 4:em\_ov 5:em\_pl 6:em\_htg
7:em\_hum1 8:em\_hum2 9:em\_ba 10:em\_ro 11:em\_un 12:em\_vi
13:em\_pat
genbank105
14:gb\_ro 15:gb\_om 16:gb\_ov 17:gb\_in 18:gb\_pl 19:gb\_ba
20:gb\_st 21:gb\_vi 22:gb\_ph 23:gb\_sy 24:gb\_un 25:gb\_pat
26:gb\_htg 27:gb\_pr1 28:gb\_pr2

Database: .

Mean 11.072; Variance 4.877; scale 2.270

Statistics:

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

Result

Result	Score	% Query Match	% Query Match Length DB	B	Ħ	Description	Pred. No.
1	506	44.1	1331	25	A29103	H.sapiens mRNA for TNF	0.00e+00
N	506	44.1	1368	25	A29098	Synthetic DNA for TNF-	0.00e+00
w	506	44.1	2050	27	HUMTNERP	Human tumor necrosis f	0.00e+00
4	506	44.1	2062	25	A21522	TNF alpha gene.	0.00e+00
IJ	506	44.1	2062	25	I43805	Sequence 24 from paten	0.00e+00
o	506	44.1	2087	27	HUMTNER	Human tumor necrosis f	0.00e+00
7	506	44.1	2111	27	HUMTNERB	Homo sapiens tumor nec	0.00e+00
œ	506	44.1	2111	25	A26412	cDNA for (55kD TNF-BP)	0.00e+00
9	506	44.1	2112	27	HUMTNFRC	Human tumor necrosis f	0.00e+00
10	506	44.1	2161	27	HSTNFR1A	H.sapiens TNF-R mRNA f	0.00e+00
11	506	44.1	2175	25	164751	Sequence 1 from patent	0.00e+00
12	506	44.1	2175	25	A43873	Sequence 1 from Patent	0.00e+00
13	506	44.1	2176	25	A19907	Synthetic nucleotide s	0.00e+00
14	504	43.9	6889	25	126928	Sequence 2 from patent	0.00e+00

45	44	43	42	. 41	40	39	3 8	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15
252	252	252	252	252	255	255	262	263	287	287	288	288	288	289	301	307	316	345	345	364	364	366	373	375	375	464	467	468	473	499
'n		22.0	'n	ε,	2	٢	'n	2	5	5	5	ŗ	5	5	σ.		.7	.0	?	۳.	۲	۳		.~	Ν.	.0	.0	.0		ω.
2179	2154	2063	2048	1956	477	477	621	2130	4283	2657	2771	1964	1964	1826	2004	581	66495	474	474	372	372	500	501	504	504	600	510	600	483	2061
14	14	14	14	14	25	25	27	14	25	27	25	27	27	25	15	15	27	25	25	25	25	25	25	25	25	25	25	25	25	25
MMTNFRE5	MUSTNFX	MMP55R	MUSMTNFR1	MUSTNFR2	143811	A20263	HSGONA	RATTNER	163120	HUMGHN	I41411	HUMGH	HSGROW2	I02855	SSU19994	FCU72344	HUMGHCSA	I43809	A20259	A20253	I43787	A20254	I43786	I43813	A20713	v	A21525	o	A29099	025
se mRNA for 55-k	or z	for p55 t	tumor necrosi	umor necros	Sequence 53 from paten	Synthetic nucleotide s	Human messenger RNA fo	r necrosis f	nce	0	nce 5 fr	th ho	rm line gene	ence 1 from Pat	crofa p55 TNF	Felis catus tumour nec	owth hor	19 from pate	nucleotide	c nucleotide	ω	c nucleotide	1 from pat		c nucleot	17 from	oligonucleotide probe.	nucl	Synthetic DNA for TNF-	55kD receptor gene for
.21e-	.21e-	1.21e-200	.21e-	.21e-	.77e-	.77e-	.28e-	.84e-	.66e-	.66e-	.72e-	.72e-	.72e-	.09e-	.30e-	.40e-	.26e-	.80e-	.80e-	.00e+0		.00e+0	.00e+0	0.00e+00	.00e+0		.00e+0	.00e+0	0.00e+00	0.00e+00

## ALIGNMENTS

RESULT 1 LOCUS	1 A29103 1331 bp DNA PAT 03-JUL-1995	
DEFINITION ACCESSION NID	ON H. sapiens mRNA for TNF-binding polypeptide from patent EP0393438. N A29103 g1247517	
KEYWORDS SOURCE ORGANISM	human. SM Homo sapiens	
	Eukaryotae;	
REFERENCE		
AUTHORS	Hauptmann, R.	
TITLE		
OCCANAL		
FEATURES	Location/Qualifiers	
source		
BASE COUNT ORIGIN	/organism="Homo sapiens" /db_xref="taxon:9606" 298 a 407 c 343 g 283 t	
Query Match Best Local Matches 5	Query Match 44.1%; Score 506; DB 25; Length 1331; Best Local Similarity 98.1%; Pred. No. 0.00e+00; Indels 1; Gaps 1; Matches 521; Conservative 0; Mismatches 9; Indels 1; Gaps 1;	
Db 333 G	GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCCGATTTGCTGTACC 392	
Оу 344 Ġ	ο-	
Db 393 A	- 7~	
Qy 404 A	4 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC 463	
Db 453 T	۔	
Qy 464 T	TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCCACCTCAGACACTGCCTC 523	

```
REFERENCE
AUTHORS
TITLE
                                                                                Ş
                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
               밁
                                    Ş
                                                           밁
                                                                                                                               Ş
                                                                                                                                                      밁
                                                                                                                                                                              Ş
                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                            BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            584
               361
                                       524
                                                           301
                                                                                    464
                                                                                                           241
                                                                                                                                  404
                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         753
                                                                                                                                                                            GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCAGGGAGTGTGAGAGCGGCTCCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 300
                                                                                                                                            AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
           CGGGACACCGTGTGGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                               AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC 360
                                                                                   TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCCAGTGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                   AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
ch 44.1%;
l Similarity 98.1%;
521; Conservative
                                                                                                                                                                                                                                                                                                                                                                             Hauptmann, R., Himmler, A., Maurer-Fogy, I. and Stratows, TNF-receptor, TNF-binding protein and DNA coding there patent: EP 0393438-A 48 24-CCT-1990; BOEHRINGER INGELHEIM INTERNATIONAL G.M.B.H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic
A29098
                                                                                                                                                                                                                                                                                                                                                                                                                                                      unidentified unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g1248892
                                                                                                                                                                                                                                                                                                                                                                                                                                             unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A29098
                                                                                                                                                                                                                                                                                         293
                                                                                                                                                                                                                                                                                                                       /organism="unidentified"
/db_xref="taxon:32644"
1. .1368
                                                                                                                                                                                                                                                                                     /organism="artificial sequence"
/db_xref="taxon:29278"
424 c 375 g 276 t
                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TNF-receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ďď
                                                                                                                                                                                                                          Score 506; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             patent EP0393438.
                                                                                                                                                                                                                             9;
                                                                                                                                                                                                                                                  Length 1368;
                                                                                                                                                                                                                          Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   874
                                                                                                                                                                                                                            Gaps
                                                                                 523
                                                                                                                                463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             572
             420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         643
                                                                                                                                                                                                                          ۲.
```

```
JOURNAL
MEDLINE
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
ACCESSION
NID
                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                      Query Match
Best Local
   Matches
                                                                                                                                                                                                                                                                                                                                                                                                   CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                     sig_peptide
                                                                                                                            mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              584 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TICCAGIGCTICAATIGCAGCCICTGCCICAATIGGGACCGIGCACCICTCCIGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATGTTAAGGGCACTGAGGACTCAGGCACCACAGT-GCTGTTGCCCCCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATGTTAAGGGCACTGAGGACTCAGGCACCACAGCCGGTGCTGCCCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Draft
Sci. U
by P.W
 Similarity
521; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Proc. Natl. Acad. Sci. U.S.A. 91017509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gray, P.W., Barrett, K.J., Chantry, D., Turner, M. and Feldman, M. Cloning of human tumor necrosis factor (TNF) receptor cDNA an expression of recombinant soluble TNF-binding protein Proc. Natl. Acad. Sci. U.S.A. 87, 7380-7384 (1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; H (bases 1 to 2050)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9339759
TNF receptor; transmembrane receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 M60275 M37764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human placenta, cDNA to mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             receptor

    U.S.A. (1990) in press kindly
P.W.Gray, 13-AUG-1990.

                                                                                          429
 44.1%;
larity 98.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry and computer-readable sequence for [Proc. U.S.A. (1990) In press] kindly submitted
                                                                                            9
                                                                                     /product="INF receptor"
611 c 566 g 4
                                                                                                                          /gene="TNF receptor"
275. .1513
                                                                                                                                                                                                                                                                     /product="TNF receptor"
/product="TNF receptor"
/db_xref="PID:g339760"
/translation="MGLSTVPDLLLPLYLLELLVGIYPSGVIGLVPHLGDREKRDSVC/translation="MGLSTVPDLLLPLYLLELLVGIYPSGVIGLVPHLGDREKRDSVCPQKXIHPQNNSICCTKCHKGTYLYNDCPGPGODTDCRECESGSFTASENHLHRCLSCSKCRKEMGGVEISSCTYDLDTVGCRKNQYRHYWSENLFQCFWCSLCLNGTVHLSCQEKQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTTVLLPLVI
                                                                                                                                                                                                  GRCLREAQYSMLATWRRRTRREATLELLGRVLRDMDLLGCLEDIEEALCAPPLPPAPS
                                                                                                                                                                                                                   FFGLCLLSLLFIGLMYRYQRWKSKLYSIVCGKSTPEKEGELEGTTTKPLAPNPSFSPT
PGFTPTLGFSPVPSSTFTSSSTYTPGDCPNFAAPRREVAPPYQGADPILATALASDPI
PNPLQKWEDSAHKPQSLDTDDPATLYAVVENVPPLRWKEFVRRLGLSDHEIDRLELQN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                               codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                   /gene="TNF receptor"
155. .1516
                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="placenta"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  necrosis factor receptor(TNF) mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ď
Score 506; DB 27; I
Pred. No. 0.00e+00;
0; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA
                                                                                          444 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tumor
                                 Length 2050;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRI
 Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              necrosis factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complete cds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Natl.
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Acad
```

275 GATAGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC

```
REFERENCE
AUTHORS
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                           BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
Query Match
                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG 634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AATGTTAAGGGCACTGAGGACTCAGGCACCACAGT-GCTGTTGCCCCCTGGT 804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCCTACCCCCAGATTGAG 754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATAGTGTGTCCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATGTTAAGGGCACTGAGGACTCAGGCACCACAGCCGGTGCTGCCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                         TNF alpha
A21522
g579599
                                                                                                                                                                                                                                                                                                                                            Eukaryotae; mitochon
Vertebrata; Eutheria
1 (bases 1 to 2062)
                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                     Patent:
                                                                                                                                                                                                                                                                                                                                                                                                   human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A21522
                                         429
                                                                                                                                                                                                                                                                                                      GB 2246569-A 1 05-FEB-1992;
Location/Qualifiers
                                       PSLLR"
1 617
                                                                                                     /db_xref="pid:q579600"
/db_xref="spid:q579600"
/db_xref="spids-prot:p19438"
/tanslation="MGLSTVPDLLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
PQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSC
SKCRKEMGQVELSSCTVDRDTVCGCRKRQYRHLWSENLFQCFNCSLCLMGTVHLSCQE
KQNTVCTCHAGFFLRENECVSCSNCKKSLECTRICLPOIENVKGTEDSGTTVLLFVL
FFGLCLLSLLFIGLMYRYQRWKSKLYSIVCGKSTPEKEGELEGTTTKPLAPNPSFSPT
                                                                            PGFTPTLGFSPVPSSTFTSSSTYTPGDCPNFAAPRREVAPPYQGADPILATALASDPI
PNPLQKWEDSAHKPQSLDTDDPATLYAVVENVPPLRWKEFVRRLGLSDHEIDRLELQN
                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
155. .1522
                                                                GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPP?
                                                                                                                                                                                               /gene="INF alpha gene"
/codon_start=1
                                                                                                                                                                                                                         /gene="TNF alpha gene"
155. .1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                         mitochondrial eukaryotes; Metazoa; Chordata; Eutheria; Primates; Catarrhini; Hominidae; H
 44
                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RNA
                                      Q
 506;
                                       443
 DB
25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT
Length 2062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   874
                                                                                                                                                                                                                                                                                                                                                             Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              403
```

Score

```
REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                  DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
밁
              γQ
                                    g
                                                     Ş
                                                                        胺
                                                                                                                                  ORIGIN
                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                             NID
                                                                                                                                                                                                                                                  KEYWORDS
                                                                                            Query Match
Best Local S
Matches 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 98.1%;
Matches 521; Conservative
                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               635
                                                                                                                                                                                                                                                                                                                                                                                                                                                      644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              335
                                                                                                                                                                                                                                                                                                                                      824
                                                                                                                                                                                                                                                                                                                                                                           764
395
                 404
                                     335
                                                                          275
                                                                                                                                                                                                                                                                                                                                                        755
                                                                                                                                                                                                                                                                                                                                                                                                                704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                      TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                          CGGGACACCGTGTGTGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 394
                                                                                                                                                                                                                                                                                                                                      AATGTTAAGGGCACTGAGGACTCAGGCACCACAGCCGGTGCTGCCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                          ū
                                                                                                                                                                                                                                                                                                                                                         AATGTTAAGGGCACTGAGGACTCAGGCACCAGT-GCTGTTGCCCCCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                 TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                    Sequence
I43805
                                                                                                                                                                                                                               Unknown.
                                                                                             l Similarity
521; Consei
                                                                                                                                                                              Unclassified.

1 (bases 1 to 2062)
Feldmann, M., Gray, P.W., Turner, M.J.C. and Brennan, TNF.alpha. receptor derived binding protein Patent: US 5633145-A 24 27-MAY-1997;
                                                                                                                                                                                                                                                          g2468903
                                                                                                                                                                                                                                                                                                I43805
                                                                                                                                            429
                                                                                            44.1%;
larity 98.1%;
Conservative
                                                                                                                                            a
                                                                                                                                                                                                                                                                             24
                                                                                                                                                             Location/Qualifiers
1. 2062
                                                                                                                                          /organism="unknown"
617 c 573 g
                                                                                                                                                                                                                                                                            from patent US 5633145
                                                                                                                                                                                                                                                                                                ďά
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred.
                                                                                            Score 506; DB 25; pred. No. 0.00e+00; 0; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches 9;
                                                                                                                                            443
                                                                                                                                            r
                                                                                                              Length 2062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                        804
                                                                                                                                                                                                                                                                                                 10-JUL-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 403
                                                                                                                                                                                                                                                                                                                                                                                              754
                                                                                                                                                                                                                                                                                                                                                                                                                                   694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    334
                                                                                                                                                                                                                                                                                                                                                                             823
                                                                                                                                                                                                                                                                                                                                                                                                                                                      703
```

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                    JOURNAL
MEDLINE
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
 Query Match
Best Local S
Matches 52
                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATGTTAAGGGCACTGAGGACTCAGGCACCACAGT-GCTGTTGCCCCTGGT 804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AATGTTAAGGGCACTGAGGACTCAGGCACCACAGCCGGTGCTGCCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Euraryotae; Eutheria; Primates; Catarrhini; Hominidae; H
Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; H
Vertebrata; Eutheria; Primates; Catarrhini; Rice,G.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g339744 cell surface receptor; tumor necrosis
                                                                                                                                                                                                                                                                                                                                                                                  necrosis factor
Cell 61, 361-37
                                                                                                                                                                                                                                                                                                                                                                                                                           Goeddel, D. V
                                                                                                                                                                                                                                                                                                                                                                                                                                       Schall, T.J., Lewis, M., Koller, K.J., Lee, A.L., Gatanaga, T., Granger, G.A., Lentz, R., Raab, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human placenta, cDNA to
                                                                                                                                                                                                                                                                                                                                                                                                            Molecular cloning and expression of
          1 44.18;
Similarity 98.18;
                                                                           433
                                                                                                                                                                                                                                                                                                                                        .Scha.
                                                                                                                                                                                                                                                                                                                                       entry and computer-readable schall, 26-MAR-1990.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tumor
    Conservative
                                                                                                                                                                                                                                                                                                                                                                                 1, 361-370 (1990)
                                                                           2
                                                                                                   FFGLGLLSLLFIGLMYRYQRWKSKLYSIVCGKSTPEKEGELEGTTTKPLAPNPSFSPT
PGFTPTLGFSPVPSSTTTSSSTYTPGDCPNFAAPRFXAPPYGGADPILATALASDPI
PNPLOKWEDSAHKPGGSLDTDDPATLYANVENVPPLRWKEFVPRLGLSDHEIDRLELDG
GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPPA
                                                                                                                                                           /db_xref="PID:g339745"
/translation="MGLSTVPDLLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC-/translation="MGLSTVPDLLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC-PQKXIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSC-SKCKKEMGQVEISSCTVDLDTVVGGCRKNQYRHYWSENLFQCFWCSLCLMGTVHLSCQE-KQNTYGTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTTVLLPLVI
                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                 /note="tumor necrosis factor receptor"
                                                                                                                                                                                                                                     /codon_start=]
                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     necrosis
                                                                        624 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ď
Score 506; DB 27;
Pred. No. 0.00e+00;
0; Mismatches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     factor receptor mRNA,
                                                                         581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA
                                                                        g
                                                                         449 t
                                                                                                                                                                                                                                                                                                                                                   sequence for [1] kindly submitted
                                                                                                                                                                                                                                                                                                                                                                                                            a receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         factor receptor
   9
                              Length 2087;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complete cds.
   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                       Rice, G.C., Wong, G.H., Kohr, W.J. and
                                                                                                                                                                                                                                                                                                                                                                                                            for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10-NOV-1993
 ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                            tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           523
 ۲,
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                             JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                     sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATGTTAAGGGCACTGAGGACTCAGGCACCACAGT-GCTGTTGCCCCTGGT 831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCCAGTGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTCCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AATGTTAAGGGCACTGAGGACTCAGGCACCACAGCCGGTGCTGCCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                                                                                                                                                                                                                                                                                                                       Eukaryotae: mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; H
1 (bases 1 to 211)
Loetscher, H., Pan, Y., -C.E., Lahm, H.-W., Gentz, R., Brockha
                                                                                                                                                                                                                                                                                                                                                                                                                  tumor necrosis factor receptor. Human cell line HL60, cDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                g339753
                                                                                                                                                                                                                                                                                                         Tabuchi, H. and Lesslauer, W. Molecular cloning and expression
                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                               M58286 M33480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                              factor recepto
/product="tumor necrosis factor receptor"
/db_xref="pID:g339754"
/db_xref="pID:g339754"
/translation="MGLSTVPDLLIPLVLLELLYGIYPSGVIGLVPHLGDREKRDSVC
POGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHGLSC
SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFOCFNCSLCLNGTVHLSCOE
                                                                                                                                                                                                                                                                               351-359 (1990)
                                                                                                                                                                     /organism="Homo sapiens"
/db_xref="taxon:9606"
/cell_line="HL60"
187. .273
                                                                                             /gene="INF receptor"
/note="55 kDa"
                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                         /product="tumor necrosis
                                                                                                                                                       /gene="TNF receptor"
                                                                             codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tumor necrosis factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA
                                                                                                                                                                                                                                                                                                             얁
                                                                                                                                         factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             receptor mRNA,
                                                                                                                                                                                                                                                                                                             the
                                                                                                                                                                                                                                                                                                             human
                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                             ğ
                                                                                                                                                                                                                                                                                                                                         Brockhaus, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complete cds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14-NOV-1990
                                                                                                                                                                                                                                                                                                             tumor necrosis
                                                                                                                                                                                                                                                                                                                                                                       Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   463
```

```
BASE COUNT
ORIGIN
                                                                  REFERENCE
AUTHORS
                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                               RESULT
LOCUS
                                                                                                                           KEYWORDS
            FEATURES
                                                                                                                                                 ACCESSION
                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 52
                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mat_peptide
                                                                                                                                                                                                                                                                                                                                                               667
                                                                                                                                                                                                                                                                                                                                                                                       644
                                                                                                                                                                                                                                                                                                                                                                                                             607
                                                                                                                                                                                                                                                                                                                                                                                                                                     584
                                                                                                                                                                                                                                                                                                                                                                                                                                                           547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   307
                                                                                                                                                                                                                                              824
                                                                                                                                                                                                                                                                     787
                                                                                                                                                                                                                                                                                            764
                                                                                                                                                                                                                                                                                                                  727
                                                                                                                                                                                                                                                                                                                                         704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 426
                                                                                                                                                                                                                                                        AATGTTAAGGGCACTGAGGACTCAGGCACCACAGT-GCTGTTGCCCCCTGGT 836
                                                                                                                                                                                                                                                                                                      TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCCTACCCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                   TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATGTTAAGGGCACTGAGGACTCAGGCACCACAGCCGGTGCTGCCCCAGGT
                                                                                                                                                                                                                                                                                                                                        ch 44.18;
l Similarity 98.18;
521; Conservative
         1 (bases 1 to 2111)
Brockhaus, Dembic, Z., Gentz, R., L
Schlaeger, E.J.
TNF-binding proteins
Patent: EP 0417563-A 24 20-MAR-1991;
F. HOFFMANN-LA ROCHE AG
LOCATION/Qualifiers
                                                                                                                                                 patent
A26412
                                                                                                   unidentified unidentified
                                                                                                                                      g904968
                                                                                                                                                                        cDNA for (55kD TNF-BP)
                                                                                        unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  445
                                                                                                                                                             EP0417563.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FFGLCLLSLLFIGLMYRYQRWKSKLYSIVCGKSTPEKEGELEGTTTKPLAPNPSFSPT
PGFTPTLGFSPVPSSTTTSGSTYTPGDCPNFAAPRREVAPPYQGADFILATALASDPI
PNPLQKWEDSAHKPQSLDTDDPATLYAVVENVPPLRWKEFVRRLGLSDHEIDRLELQN
GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPPA
PSLLR*
PSLLR*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 187. .1554
/gene="TNF receptor"
274. .1551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /product="tumor necrosis factor 629 c 587 g 450 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="TNF receptor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 506; DB 27;
Pred. No. 0.00e+00;
0; Mismatches 9
                                                                                                                                                                       tumor necrosis
                                                                                                                                                                                               DNA
                                                                   Lesslauer,
                                                                                                                                                                        factor
                                                                                                                                                                                               PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 2111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels 1;
                                                                                                                                                                       binding
                                                                   Loetscher
                                                                                                                                                                                               26-APR-1995
                                                                                                                                                                       protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                               726
                                                                                                                                                                                                                                                                                                                                                                                                                                                          606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      486
                                                                                                                                                                                                                                                                                           823
                                                                                                                                                                                                                                                                                                                  786
                                                                                                                                                                                                                                                                                                                                        763
                                                                                                                                                                                                                                                                                                                                                                                      703
                                                                                                                                                                                                                                                                                                                                                                                                             666
                                                                                                                                                                                                                                                                                                                                                                                                                                    643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               523
                                                                                                                                                                        from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ۳
                                                                                                                                     RESULT
LOCUS
                                                                                                                                                                                   Š
                                                                                                                                                                                                          유
                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                g,
                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                 멂
                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
AUTHORS
```

á

밁 Š 밁 Š 밁

Š

UIN

Ş 밁 å

용

ρ 밁 Ş 밁 Š 밁

밁

```
BASE COUNT
ORIGIN
                                                           KEYWORDS
SOURCE
ORGANISM
               REFERENCE
                                                                                                                           ACCESSION
                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS
                                                                                                                                                                                                                                                           824
                                                                                                                                                                                                                                                                                          787
                                                                                                                                                                                                                                                                                                                          764
                                                                                                                                                                                                                                                                                                                                                          727
                                                                                                                                                                                                                                                                                                                                                                                          704
                                                                                                                                                                                                                                                                                                                                                                                                                          667
                                                                                                                                                                                                                                                                                                                                                                                                                                                           644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       344 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         307
                                                                                                                                                                                                                                                                                                                       CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 366
                                                                                                                                                                                                                                                          TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                                                                                                                                                                                                                                                                          AATGTTAAGGGCACTGAGGACTCAGGCACCACAGT-GCTGTTGCCCCCTGGT 836
                                                                                                                                                                                                                                                                                                                                                                                                                          TTCCAGTGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
           Eukaryotae; mitochondrial eukaryotes; Metazoa;
Vertebrata; Eutheria; Primates; Catarrhini; Hon
1 (bases 1 to 2112)
                                                                                                                             M63121 M75861
Himmler, A.,
                                                              Homo sapiens
                                                                          tumor necrosis factor Human cDNA to mRNA.
                                                                                                                                                                                           HUMTNFRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product="55 kD TNF-BP"
//product="55 kD TNF-BP"
//db_xref="910:9904969"
//translation="MGLSTVPDLLLPLYLLELLVGIYPSGVIGLVPHLGDREKRDSVC
//translation="MGLSTVPDLLPLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSC
PQKKYIHPQNNSICCTRCHKGTYLYNDCPGPGQDTDCRECESGSTTASENHLRHCLSC
SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
KQNTVCTCHAGGFTLRENECVSCSNCKKSSLECTKLCLPQIENVGTEDSGTTVLLPLVI
FFGLCLLSLLFIGLMYRYQRWKSKLYSIVCGKSTPEKGELEGTTTKPLAPNPSFSPT
PGFTPTIGFSFVPSSTTTSSSTYTPGDCPNFAAPRREVAPPYGGADPILATALASDPI
PNPLQKWEDSAHKPQSLDTDDPATLYAVVENVPPLRWKEFVRRLGLSDHEIDBLELQN
PNPLQKWEDSAHKPQSLDTDDPATLYAVVENVPPLRWKEFVRRLGLSDHEIDBLELQN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Artificial
187. .1554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="pid:e161624"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      44.18;
98.18;
Maurer-Fogy, I., Kroenke, M.,
                                                                                                                                                           necrosis
                                                                                                                                                                                           2112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        O
                                                                                                                                                                                          đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 506; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 9
                                                                                                                                                           factor receptor
                                                                                           receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        587
                                                                                                                                                                                           mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequences"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        450 t
                                                                                                                                                           (TNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 2111;
                                                                                                                                                           receptor) mRNA, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                Hominidae;
                                                                                                                                                                                                                                                           874
                                                                                                                                                                                           30-SEP-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1;
                                 Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        523
                                                                                                                                                                                                                                                                                                                            823
                                                                                                                                                                                                                                                                                                                                                          786
                                                                                                                                                                                                                                                                                                                                                                                          763
                                                                                                                                                                                                                                                                                                                                                                                                                          726
                                                                                                                                                                                                                                                                                                                                                                                                                                                           703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۲.
```

```
밁
                   밁
                                                                                    밁
                                                                                                                  S
                                                                                                                                                                                     Ş
                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                           ş
                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sig_peptide
                   807
                                                                                    747
                                                                                                                       704
                                                                                                                                                        687
                                                                                                                                                                                          644
                                                                                                                                                                                                                          627
                                                                                                                                                                                                                                                         584
                                                                                                                                                                                                                                                                                                                                                             507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    327
                                                    764
                                                                                                                                                                                                                                                                                           567
                                                                                                                                                                                                                                                                                                                            524
                                                                                                                                                                                                                                                                                                                                                                                               464
                                                                                                                                                                                                                                                                                                                                                                                                                              447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                           CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                               TGCAGGGAGTGTGAGAGCGGCTCCTTCACCCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                               TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCTACCCCAGATTGAG
                                                                  TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                    CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                          AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 446
                 AATGTTAAGGGCACTGAGGACTCAGGCACCACAGT-GCTGTTGCCCCCTGGT 856
                                                                                                                                                                                      TTCCAGTGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                           TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                        AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
Pfizenmaier,K., Lantz,M., Olsson,I., Hauptmann,R., Adolf,G.R.

Molecular cloning and expression of human and rat t factor receptor chain (p60) and its soluble derivat necrosis factor-binding protein

DNA_Cell Biol. 9, 705-715 (1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  44.18;
larity 98.18;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product="tumor necrosis factor receptor"
/db_xref="pID:g339756"
/db_xref="pID:g339756"
/translation="MGLSTVPDLLPIVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
/translation="MGLSTVPDLLPIVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
POGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSC
SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLMGTVHLSCQE
KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTTVLLPLVI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /product="tumor necrosis factor receptor" 632 c 589 g 456 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="TNF receptor"
294. .1571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FFGLCLLSILFIGLMYRYQRWKSKLYSIVCGKSTPEKEGELEGTTTKPLAPNPSFSPT
PGFTPTLGFSSPVPSSTFTSSSYYTPGDCDNFAAPREWAPPYGGADPILATALASDPI
PNPLQKWEDSAHKPQSLDTDDPATLYAVVENVPPLRWKEFVRRLGLSHBEIDRLEDQ
GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:9606"
207. .293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /gene="TNF receptor"
207. .1574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="TNF receptor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene="INF receptor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .1574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 506; DB 27;
Pred. No. 0.00e+00;
0; Mismatches 9
_
=
=
=
=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human and rat tumor
soluble derivative,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 2112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stratowa, C. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 necrosis
tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                  806
                                                                                                                                                     746
                                                                                                                                                                                      703
                                                                                                                                                                                                                        686
                                                                                                                                                                                                                                                         643
                                                                                                                                                                                                                                                                                       626
                                                                                                                                                                                                                                                                                                                        583
                                                                                                                                                                                                                                                                                                                                                          566
                                                                                                                                                                                                                                                                                                                                                                                           523
                                                                                                                                                                                                                                                                                                                                                                                                                             506
                                                                                                                                                                                                                                                                                                                                                                                                                                                            463
                                                                                                                    763
```

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
LOCUS
   밁
                                                   Ş
                                                                                                                               망
                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                       Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            polyA_site
                                                                                                       436 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 495
                                                                                                                                                                                                     344 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                       376 GATAGTGTGTGTCCCCAAGGAAAATATATCCCACCCTCAAAATAATTCGATTTGCTGTACC 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         824 AATGTTAAGGGCACTGAGGACTCAGGCACCACAGCCGGTGCTGCCCCAGGT
496 TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10
                                                                 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nophar,Y., Kemper,O., Brakebusch,C., Englemann,H., Zwang,R., Aderka,D., Holtmann,H. and Wallach,D.
Soluble forms of tumor necrosis factor receptors (TNF-Rs). The for the type I TNF-R, cloned using amino acid sequence data of the teceptor encodes both the cell surface and a soluble form the receptor EMBO J. 9 (10), 3269-3278 (1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H.sapiens TNF-R mRNA for tumor necrosis factor
X55313
                                                                                                                                                                                                                                                                                                                                    h 44.1%;
Similarity 98.1%;
521; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; H
l (bases l to 2161)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TNF-R gene; tumor necrosis factor receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="INF-R"
/note="putative"
2161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=1
/product="tump: necrosis factor receptor type 1"
/product="tump: necrosis factor receptor type 1"
/db_xref="swiss-prof: p19438"
/db_xref="swiss-prof: p19438"
/db_xref="swiss-prof: p19438"
/translation="mgj.srvpDillpt/LLELLVGIVPSGVIGIVPHLGDREKRDSVC/Translation="mgj.srvpDillpt/LLELLVGIVPSGVIGIVPHLGDREKRDSVC/TXTIPONASICCTRCHKGTYLYNCPGPGQDTDCRECESGSTTASENHLRHCLSCE
SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
KQNTVCTCHAGFFLREMECVSCSNCKKSLECTKLCLPQIENWGTEDSGTTVLLPLVI
FFGLCLLSLIFIGLAWRYQNAKSKLYSIVCGKSTPEKEGELEGTTTTKPAPNPSFSFT
PGFTPTLGFSPVPSSTFTSSSTYTPGDCPNFAAPRRVAPPVGGADPILATALASDPI
PNPLOKWEDSAKKPGSLDTDDPATLYAVVENVPPLKWKEFVRRLGLSDHEIDRIELGN
PNPLOKWEDSAKKPGSLDTDDPATLYAVVENVPPLKWKEFVRRLGLSDHEIDRIELGN
PNPLOKWEDSAKKPGSLDTDDPATLYAVVENVPRLWKEFVRRLGLSDHEIDRIELGN
PNPLOKWEDSAKKPGSLDTDPATLYAVVENVPRLWKEFVRRLGLSDHEIDRIELGN
PNPLOKWEDSAKKPGSLDTDPATLYAVVENVPRLWKEFVRRLGLSDHEIDRIELGN
PNPLOKWEDSAKKPGSLDTDPATLYAVVENVPRLWKEFVRRLGLSDHEIDRIELGN
PNPLOKWEDSAKKPGSLDTDPATLYAVVENVPRLWKEFVRRLGLSDHEIDRIELGN
PNPLOKWEDSAKKPGSLDTDPATLYAVVENVPRLWKEFVRRLGLSDHEIDRIELGN
PNPLOKWEDSAKKPGSLDTDPATLYAVVENVPRLWKEFVRRLGLSDHEIDRIELGN
PNPLOKWEDSAKFURDRIELGN
PNPLOKWEDSAKFURDRIELGN
PNPLOKWEDSAKFURDRIELGN
PNPLOKWEDSAKFURDRIELGN
PNPLOKWEDSAKFURDRIELGN
PNPLOKWEDSAKFURDRIELGN
PNPLOKWEDSAKFURDRIELGN
P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="TNF-R"
2145. .2150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="TNF-R"
757. .857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="TNF-R"
642 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="TNF-R"
505. .633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /gene="TNF-R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene-"TNF-R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="TNF-R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ďď
                                                                                                                                                                                                                                                                                                                                 Score 506; DB 27;
Pred. No. 0.00e+00;
0; Mismatches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       604 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRI
                                                                                                                                                                                                                                                                                                                                                                                                          Length 2161;
                                                                                                                                                                                                                                                                                                                                        Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        receptor type 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-JAN-1993
                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                     403
                                                                 463
                                                                                                                                                                                                                                                                                                                                        ۲
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                       BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                               JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                          NID
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
LOCUS
                                                              В
                                                                                                      밁
                                                                                                                        Š
                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                    밁
                                         Ş
                                                                                  Š
                                                                                                                                                밁
                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
Š
                                                                                                                                                                                                            Query Match
Best Local S
Matches 52
                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          556
  584
                     616
                                                                                    464
                                                                                                       496
                                                                                                                            404
                                                                                                                                                 436
                                                                                                                                                                    344
                                                                                                                                                                                        376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                464
                                                                                                                                                                                                                                                                                                                                                                                                                                                         11
                                                                                                                                                                 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                              TGCAGGGAGTGTGAGAGAGCGGCTCCTTCACCGCTTCAGAAAAACCACCTCAGACACTGCCTC
                                                                                                                         AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGACACCGTGTGTGCGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT 675
                                                    AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCCTACCCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAACAGAACACCGTGTGCACCTGCCATGCAGGTTTCTTAAGAGAAAAACGAGTGTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
  CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                         AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                  TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCCAGTGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                    Sequençe
164751
g2481645
                                                                                                                                                                                                           ch 44.1%;
1 Similarity 98.1%;
521; Conservative
                                                                                                                                                                                                                                                                                                      A (bases 1 to 2175)

Wallach, D., Brakebusch, C., Varfolom
Molecules influencing the shedding openation and their use
Patent: US 565859-A 1 09-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                        Unknown
                                                                                                                                                                                                                                                                                                                                                                                 Unknown
                                                                                                                                                                                                                                                                                                                                                             Unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                164751
                                                                                                                                                                                                                                                                 474
                                                                                                                                                                                                                                                                 ø
                                                                                                                                                                                                                                                                                                                                                                                                                          -
                                                                                                                                                                                                                                                              /organism-"unknown"
641 c 604 g
                                                                                                                                                                                                                                                                                   Location/Qualifiers
1. 2175
                                                                                                                                                                                                                                                                                                                                                                                                                                              2175
                                                                                                                                                                                                                                                                                                                                                                                                                         patent US 5665859
                                                                                                                                                                                                                                                                                                                                                                                                                                              ďď
                                                                                                                                                                                                           Score 506; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                             Varfolomeev, E. shedding of the
                                                                                                                                                                                                                                                                 456
                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT
                                                                                                                                                                                                                               Length 2175;
                                                                                                                                                                                                                                                                                                                              and
                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                             Batkin,M. receptor,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           905
                                                                                                                                                                                                                                                                                                                                                                                                                                              26-SEP-1997
                                                                                                                                                                                                            1;
                                                                                                                                                                                                                                                                                                                              their
                                                                                                                                                                                                            Gaps
                                                                                                      555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                675
                                                              615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               523
                                         583
                                                                                   523
 643
```

```
REFERENCE
AUTHORS
                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                             δÃ
                                                                                                           Ş
                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                 밁
                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                         Query Match
Best Local S
Matches 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                 496
                                                 404
                                                                                                               344
                                                                                                                                              376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 676
                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12
TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                           TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATGTTAAGGGCACTGAGGACTCAGGCACCACAGCCGGTGCTGCCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATGTTAAGGGCACTGAGGACTCAGGCACCACAGT-GCTGTTTGCCCCCTGGT 905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCCTGTAGTAACTGTAAGAAAAGCCTGGAGGTGCACGAAGTTGTGCCCTACCCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCCAGTGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
A43873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      other publication ZA 9407962 951121 other publication JP 7194376 950801 other publication AU 7574294 950504 other publication CA 2133872 950413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Wallach,D., Brackebusch,C., Varfolomeev,E. and Batkin,M. Proteases capable of shedding the soluble TNF-receptor a derived peptides and antibodies against the proteases in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A43873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              unidentified
unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g2299022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent: EP 0657536-A 1 14-JUN-1995; YEDA RES & DEV (IL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the shedding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 2175)
                                                                                                                                                                                                                                                      474
                                                                                                                                                                        44.18;
ilarity 98.18;
Conservative
                                                                                                                                                                                                                                                /db_xref="PID:e305402"
/db_xref="PID:e305402"
/db_xref="PID:e305402"
/db_xref="PID:e30299023"
/translation="MGLSTYPDLLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
/PQGKY1HPQNNSICCTKCHGYTYLXNDCPGPGQDTDCRECESGSTASENHLRHCLSC
SKCRKEMGQVEISSCTVDRDTVCGCRKNOYRHYWSENLFQCFNCSLCLNGTVHLSCQE
KQNTVCTCHAGFFLRENGCVSCSNCKSLECTKLCLPQIENVKGTEDSGTTVLLPJVI
FFGLCLLSLLEIGLAMRYQFMKSKLYSIVCGKSTPERKGELEGTTKFLAHPSFSFSFT
PGFTPTLGFSPVPSSTFTSSSTYTPGDCPNFAAPRREVAPPYQGADPILATALASDPI
PNFLOKWEDSAHKPQSLDTDDPATLYAVVENVPPLRWKEFVRRLGLSDHEIDRLELON
GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPPA
PSLLR"

74 a 641 c 604 g 456 t
                                                                                                                                                                                                                                                      ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="unidentified"
/db_xref="taxon:32644"
256. 1623
                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="unnamed protein
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .2175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          đđ
                                                                                                                                                                        Score 506; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EP0657536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                          product"
                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT
                                                                                                                                                                                                       Length
                                                                                                                                                                           Indels
                                                                                                                                                                                                        2175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                        Gaps
                                                 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   763
                 555
```

1.

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
SOURCE
 Ş
                          밁
                                            δÃ
                                                                        밁
                                                                                             Qγ
                                                                                                                        밁
                                                                                                                                           Ş
                                                                                                                                                                       밁
                                                                                                                                                                                             Ş
                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                              Query Match 44.1%;
Best Local Similarity 98.1%;
Matches 521; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                  source
     584
                                                  524
                                                                         556
                                                                                                 464
                                                                                                                         496
                                                                                                                                                404
                                                                                                                                                                        436
                                                                                                                                                                                               344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13
                                                                                                                                                                                            CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAAACCTT 675
                                                                                                                                                           AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ANTGTTAAGGGCACTGAGGACTCAGGCACACAGCCGGTGCTGCCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TICCAGIGCTICAATIGCAGCCICIGCCICAATIGGGACCGIGCACCICICCIGCCAGGAG 735
                                                              AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                            TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 555
                                                                                                                                             AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCCTACCCCAGATTGAG 855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAACAGAACACCGTCTGCACCTGCCATGCAGGTTTCTTATGAGAGAAAACGAGTGTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGACACCGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC 615
                                                                                                TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATGTTAAGGGCACTGAGGACTCAGGCACCACAGT-GCTGTTGCCCCTGGT 905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTGTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic
A19907
                                                                                                                                                                                                                                                                                                                               Patent: EP 0433900-A 28 26-JUN-1991;
YEDA RESEARCH AND DEVELOPMENT COMPANY LIMITED LOCATION/Qualifiers
1. 2176
                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 2176)
Wallach, D., Nophar, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                       unidentified unidentified
                                                                                                                                                                                                                                                                                                                                                                                          Expression of the recombinant tumor necrosis factor binding protein
                                                                                                                                                                                                                                                                                                                                                                                                        Aderka, D
                                                                                                                                                                                                                                                                                                                                                                                                                                           unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g641222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A19907
                                                                                                                                                                                                                                                                                                         /organism="Artificial
642 c 604 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ďď
                                                                                                                                                                                                                                            Score 506; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence
                                                                                                                                                                                                                                                                                                                                                                                                                  Kemper, O., Engelmann, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Type
                                                                                                                                                                                                                                                                                                        sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                I TNF
                                                                                                                                                                                                                                              9; Indels
                                                                                                                                                                                                                                                                   Length 2176;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 receptor
                                                                                                                                                                                                                                                                                                                                                                                                                   Brakebusch, C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          04-OCT-1994
                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      583
                                                583
                                                                        615
                                                                                                523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        763
                                                                                                                                                                                                                                              ۳.
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
LOCUS
ş
                    밁
                                    ð
                                                              밁
                                                                                  Ş
                                                                                                       밁
                                                                                                                         Ş
                                                                                                                                                밁
                                                                                                                                                                   Ş
                                                                                                                                                                                         밁
                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                        1725
                     2145
                                                                                                                                                                                           1905
                                                                                                                                                                                                                                     1845
                                                                                                                                                                                                                                                                              1785
                                                                                                                                                 1965
                                                                                                                            584
                                                                                                                                                                      524
                                                                                                                                                                                                                 464
                                                                                                                                                                                                                                                          404
                                                                                                                                                                                                                                                                                                   344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          764
 764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14
                                                                                                                                                                    TGCAGGGAGTGTGAGAGAGGGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                    AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 1844
                                                                                                                                                                                                                                                                                                             GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 1784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AATGTTAAGGGCACTGAGGACTCAGGCACCACAGT-GCTGTTGCCCCCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATGTTAAGGGCACTGAGGACTCAGGCACCACAGCCGGTGCTGCCCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                      CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT 2024
                                                                                                                                                                                                                                                                                                   GATAGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCTGTAGTAACTGTAAGAAAAAGCCTGGAGTGCACGAAGTTGTCCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                  TTCCAGTGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCCTGTCAGGAG
                                                                                             TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                          AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
 TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
126928
                                                                                                                                                                                                                                                                                                                                           ch 43.9%;
l Similarity 99.0%;
509; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                       Unclassified.
1 (bases 1 to 6889)
Crowley,C.W.
Method for selecting high-expressing
Patent: US 5561053-A 2 01-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g1606798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        126928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                                                                                                                                                                                                                                                                                                                             /organism="unknown"
1826 c 1681 g
                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 patent US 5561053.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   đđ
                                                                                                                                                                                                                                                                                                                                           Score 504; DB 25; I
Pred. No. 0.00e+00;
0; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                                                                                                                                                                                1653
                                                                                                                                                                                                                                                                                                                                                                                                                                                   host
                                                                                                                                                                                                                                                                                                                                                               Length 6889;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT
                                                                                                                                                                                                                                                                                                                                            Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-OCT-1996
                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                         1964
                                                                                                                                                                                                                                   1904
                                                                                                                                                                                                                                                                                                   403
                    2204
                                                             2144
                                                                                                                            643
                                                                                                                                                                                                               523
 823
                                        763
                                                                                   703
                                                                                                       2084
                                                                                                                                                                      583
                                                                                                                                                                                                                                                          463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             703
                                                                                                                                                                                                                                                                                                                                            0
```

```
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                          Š
                                                                   밁
                                                                                     Š
                                                                                                            밁
                                                                                                                                      δÃ
                                                                                                                                                               밁
                                                                                                                                                                                  Ş
                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                               å
                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 43.5%;
Best Local Similarity 97.9%;
Matches 520; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               824
                                              764
                                                                     694
                                                                                                       644
                                                                                                                                                                                        584
                                                                                                                                                                                                               515
                                                                                                                                                                                                                                      524
                                                                                                                                                                                                                                                             455
                                                                                                                                                                                                                                                                                    464
                                                                                                                                                                                                                                                                                                            395
                                                                                                                                                                                                                                                                                                                                   404
                                                                                                                                                                                                                                                                                                                                                          335
                                                                                                                                                                                                                                                                                                                                                                            704
                                                                                                                                                                  575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15
                                                                                                                                                                                                                                                                                 TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 454
                                                                                                                                                                                                                                                                                                                               AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 394
CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT 574
                                                                                                                                                                                                                                                  AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC 514
                                                        TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG 753
                                                                                                                                                      TTCCAGTGCTTCAATTGCAGCCTCTGCCTCCAATGGGACCGTGCAC-TCTCCTGCCAGGAG 633
                                                                                                                                                                                      CGGGACACCGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT 643
                                             TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCTACCCCAGATTGAG
                                                                                           AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                         TTCCAGTGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human.
Homo sapiens
Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 2061)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g1247401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            55kD receptor gene for human TNF-alpha.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MODIFIED HUMAN TNFALPHA (TUMOR NECROSIS FACTOR ALPHA) RECEPTOR Patent: WO 9207076-A 23 30-APR-1992;
Patent: WO 020704041f1ers
1. .2061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A20255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
616 c 573 g 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   đđ
                                                                                                                                                                                                                                                                                                                                                                                                                           Score 499; DB 25; Length 2061; Pred. No. 0.00e+00; 0; Mismatches 9; Indels 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      443 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT
                                                                                                                                                                                                                                                                                                                                                                                                                            Indels 2;
                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                     583
                                                                                           763
                                                                                                                                         703
                                                                                                                                                                                                                                                                                                                                                                                                                            'n
```

Search completed: Wed May 6 14:00:37 1998 Job time: 1184 secs.

### THIS PAGE BLANK (USPTO)

Nmatch STD: D	Scoring table: T	Title: > Description: ( Perfect Score: 1 N.A. Sequence: Comp:	Run on: Wed May 6 : Tabular output not generated	MPsrch_nn n.a	Release Copyrigh	
Dbase 0; Query 0	TABLE default Gap 6	>US-08-804-166-5 (1-1147) from US08804166.seq 1147 1 TCGAGATGGCTACAGGTAAGAATCTTAAGGATCCCTCGAG 1147 AGCTCTACCGATGTCCATTCTTAGAATTCCTAGGGAGCTC	Wed May 6 14:19:06 1998; MasPar time 149.10 Seconds 887.730 Million cell updates/sec	n.a. database search, using Smith-Waterman algorithm	Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd	

Database: Minimum Listing n-geneseq30
1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26 27:part27 28:part28
29:part29 30:part30 31:part31 32:part32 33:part33 Match 0% first 45 summaries

Searched:

159651 seqs, 57698962 bases

×

Post-processing:

Statistics: Mean 9.143; Variance 4.888; scale 1.870

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

														. %
15	. 13	12	11	10	9	00	7	σ	տ	4	w	2	ם	Result
288	375	468	502	504	504	504	506	506	506	506	506	506	506	Score
25.1	32.7	40.8	43.8	43.9	43.9	43.9	44.1	44.1	44.1	44.1	44.1	44.1	44.1	Query
4 / 4 2771	504	809	2170	6889	2176	2141	2175	2111	2088	2062	2062	1368	1334	Query Match Length DB
3 1	۔	4	ø	18	ນ	_	15	N	N	4	ω	œ	H	BG
T76770	Q24445	02441	Q50870	T15931	Q12215	Q06285	Q90513	Q10955	Q10883	Q24440	020973	Q49932	Q06282	ID
Encodes truncated TNF Rat Fabbl gut-specifi	truncated	Encodes truncated TNF	p55 Tumour necrosis f	DHFR/intron (WTrasSD)	Type I TNF receptor.	Human Tumour Necrosis	p55 TNF-R gene.	Encodes human 55kD TN	30kD TNF inhibitor pr		TNF-alpha binding pro	Lambda-derived TNF-R	Plasmid Tumour Necros	Description
1.16e-243 1.27e-198	1.89e-267	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	Pred. No.

Query Match

44.18;

Score 506;

DB 1;

Length 1334;

	44444333333333322222222222222222222222
	287 254 254 264 264 264 264 264 266 266 266 266 26
	57.88.13.13.14.5.59.60.00.00.00.00.00.00.00.00.00.00.00.00.
	2160 336 707 719 719 743 743 744 759 836 836 836 836 836 836 836 836 836 836
	33 66 117 117 117 117 117 117 117 117 117
ALIGNMENTS	762826 7623336 7703335 7703324 7703323 7703323 7703223 7703223 7703229 7703229 7703229 7703229 7703229 7703229 7703229 7703229 7703229 7703233 770323 7703 770
	Human growth hormone Human growth hormone Single chain gonadotr Engineered human alph Dimeric glycoprotein Gonadotropin alpha sub Single chain gonadotr Encodes truncated TNF Encodes truncated TNF Sequence of gene for Porcine alpha subunit Ovine FSH alpha subunit Equine
	7.82e-198 2.85e-180 9.85e-180 9.85e-1172 1.15e-172 1.15e-172 1.15e-172 1.15e-172 1.15e-172 1.15e-173 1.15e-173 1.39e-140 3.67e-91 1.76e-86 3.9e-140 3.57e-91 1.76e-86 3.9e-54 1.55e-53 1.40e-38

```
TRESULT

PRESULT

PRE
DNA encoding TNF binding protein and TNF- receptor - used in protein tumour treatment and to understand mechanismsm to TNF action PS Disclosure; Fig 1(1-3); 51pp; German.

CC profit is one of 30 positives clones in a screened cDNA library CC from induced TNF-induced fibrosarcoma cells. A TNF-BP had been CC isolated from the urine of patients with uraemia and probes/primers CC were constructed from the determined amino acid sequence. CC To produce a vector expressing a soluble form of TNF-binding CC protein, this plasmid was cut with Xmm1, amplified by PCR and the CC amplified DNA cut with BamHI and EcoRI.

CC HABLORUT (000283) to give the recover pTNF-BP. This was cut with BamHI and EcoRI, and the recovered fragment inserted into C pAD-CMVI (000283) to give the required plasmid pADTNF-BP.

See also Q06283. 299 A; 409 C; 342 G; 284 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product-TNF-BP

EP-39338-A.
24-OCT-1990.
26-APR-1990.
106624.
21-APR-1989; DE-913101.
21-JUN 1989; DE-92028.
(BOEH) BOEBRINGER INGELHEIMINT.
Hauptmann R, Himmler A, Maurer-Fogy I, Stratowa C;
BPISCH 90-321897/43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  006282 standard; DNA; 1334 BP.
006282;
29-JAN-1991 (first entry)
Plasmid Tumour Necrosis Factor-Binding Protein 15 cDNA insert.
Tumour necrosis factor binding protein; TNF-BP; TNF-receptor;
pTNF-BP15; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers 213..1325
```

Local

Ž O

```
Ş
                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                           QY
                                                                                                                                                                                                                                                                                                                                                                                              몽
                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뮻
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ β
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Loc
Matches
                                                                                                                                           /rtag= a
/product= hr
sig_peptide
                                                           (IMMV ) II
Smith CA;
                                                                                                                                                                                                                                                                                   Q49932 standard;
Q49932;
29-APR-1994 (f1
                                                                                                                                                                                                                       29-APR-1994 (first entry)
Lambda-derived TNF-R CDNA.
Lambda-derived TNF-R CDNA.
Human; tumour necrosis factor receptor; TNF-R; interleukin-l re
II-1R; fusion protein; linker; TNF; II-1; cachexia; cerebral ma
Theumatoid arthritis; diabetes; multiple sclerosis; septic shoc
pulmonary fibrosis; silicosis; allograff; xenograft; rejection;
graft verses host disease; sepsis; inflammation; allergy;
New fusion protein tumour necrosis factor and human in receptor - useful in therapy, diagnosis and assays of rheumatoid arthritis, diabetes, cerebral malaria, seps Disclosure; Page 57-59; 85pp; English.
                                                                  14-OCT-1993.
26-MAR-1993; U02938.
30-MAR-1992; US-860710.
(IMMV ) IMMUNEX CORP.
                                                                                                          /*tag=_c
W09319777-A.
                                                                                                                                                                                                                autoimmune dysfunction;
                                                                                                                                                                                                                                                                                                                                            824
                                                                                                                                                                                                                                                                                                                                                                                                                                          693
                                                                                                                                                                                                                                                                                                                                                                                                                                                            644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              464
                                                                                                                                                                                                                                                                                                                                                                                 764
                                                                                                                                                                                                                                                                                                                                                                                                    753
                                                                                                                                                                                                                                                                                                                                                                                                                       704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      393
                                                                                                                                                                                                                                                                                                                                          aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac 452
                                                 93-336592/42.
                                                                                                                                                                                                        sapiens
                                                                                                                                                                                                                                                                                                                                                                                         tcctgtagtaactgtaagaaaagcctggagtgcacgaagttgtgcctaccccagattgag
                                                                                                                                                                                                                                                                                                                                                                                                                   ttocagtgottoaattgoagoctotgoctoaatgggaccgtgcacotctcotgocaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc
                                                                                                                                                                                                                                                                                                                                                                                TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cgggacaccgtgtgtgggtgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                   -gt10-7-ctnfbp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . Similarity
521; Conser
                                         R42059.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             larity 98.1%;
Conservative
                                                                                                                                               1..120
                                                                                                                                                                                                                                                                                                     CDNA
                                                                                                                                                                                                                                                                                                     6
                                                                                                                                                                                                                                                                                                     mRNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . 0.00e+00;
                   e.g.
                                                                                                                                                                                                                                                                                                                                           874
                                                                                                                                                                                                                                             shock;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       403
                                                                                                                                                                                                                                                                                                                                                                                                  812
                                                                                                                                                                                                                                                                                                                                                                                                                     763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          392
                                                                                                                                                                                                                                                                                                                                                                                 823
                                                                                                                                                                                                                                                                                                                                                                                                                                                          703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       583
```

```
Ş
                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   999999999999999999999988%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CC TLY-11nker-TNF-R linker-TNF-R or

CTNF-R-linker-TNF-R linker-TNF-R or

CTNF-R-linker-TNF-R linkers separate the individual mostiles

CC TNF-Inker may comprise 5-100 amino acids selected from Gly, Asp,

CC The linker may comprise 5-100 amino acids selected from Gly, Asp,

CC Ser, Thr and Ala. These linkers separate the individual mostiles

CC Ser, Thr and Ala. These linkers separate the fusion protien is

CC capable of folding into the secondary or tertiary structure required

CC capable of folding into the secondary or tertiary structure required

CC capable of folding into the secondary or tertiary structure required

CC capable of folding into the secondary or tertiary structure required

CC capable of folding into the secondary or tertiary structure required

CC capable of folding into the secondary or tertiary samp be used in

CC therapy, diagnosis and assays for conditions mediated by TNF or IL-1,

CC particularly in conditions in which both TNF and IL-1 play a causitive

CC cole. They may be used to treat cachexia, rheumatid arthritis,

CC diabetes, multiple sclerosis, pulmonary fibrosis and silicosis,

CC corebral malaria, allograft and xenograft rejection in graft verses

CC corebral malaria, allograft and xenograft rejection in graft verses

CC corebral malaria, septic shock, inflammation, allergies and

CC autonmune dysfunctions.

Sequence 1368 BP; 292 A; 424 C; 376 G; 276 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               344
                                                                                                                                                                                                                                                                      764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                     ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                                                      aatgttaagggcactgaggactcaggcaccacagt-gctgttgcccctggt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | agtgccacaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gatagtgtgtgtccccaaggaaaatatatccaccctcaaaaataattcgatttgctgtacc
                                                                                                                                                                                                                                                                                        toctgtagtaactgtaagaaaagcctggaagtgcacgaagttgtgcctaccccagattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                      AATGTTAAGGGCACTGAGGACTCAGGCACCACAGCCGGTGCTGCCCCAGGT
                                                                                                                                                                                                                                                                   TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               44.18;
larity 98.18;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 506; DB 8;
Pred. No. 0.00e+00;
0; Mismatches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                     763
                                                                                                                                                                                                                                                                                                                                                                                                       703
                                                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               403
```

Q20973 standard; DNA; 2062 Q20973; 11-MAY-1992 (first entry) TNF-alpha binding protein g Tumour necrosis factor alph extracellular domain.

alpha; gene

autoimmune

diseases;

Location/Qualifiers 155..1522

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                  Š
                                                                                                      Ş
                                                                                                                                  밁
                                                                                                                                                         Š
                                                                                                                                                                                     밁
                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
S
                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GB2246569-A.
05-FEB-1992; 013410.
15-JUN-1990; 013410.
15-JUN-1990; GB-013410.
(CHAR-) CHARING CROSS SUNLE.
Feldman M, Gray P, Turner M, I
WPI; 92-043613/06.
P-PSDB; R20787.
New tumour necrosis factor all
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New tumour necrosis factor alpha binding protein and polypeptide useful in treating cachexia, sepsis and auto immune diseases e.g. rheumatoid arthritis Disclosure; Fig 1; 25pp; English.

The sequence is that of DNA encoding tumour necrosis factor alpha binding protein which was obtd. from a human placental cDNA library in lambda gtll using a probe (Q20974). The DNA also encodes the extracellular domain of human TNF alpha receptor and as such it is useful for treating diseases where TNF alpha is involved as a causative agent, e.g. cachexia, sepsis and autoimmune diseases, specifically rheumatoid arthritis. See also Q20974.

Sequence 2062 BP; 429 A; 616 C; 573 G; 444 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sig_peptide
/*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mat_peptide
/*tag= c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note- "encodes the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note- "homologous to probe Q20974" misc_feature 242..751
 824
                                                      764
                                                                                                                                                            644
                                                                                                                                                                                       575
                                                                                                                                                                                                                 584
                                                                                                                                                                                                                                            515
                                                                                                                                                                                                                                                                       524
                                                                                                                                                                                                                                                                                                 455
                                                                                                                                                                                                                                                                                                                            464
                                                                                                                                                                                                                                                                                                                                                      395
                                                                                                                                                                                                                                                                                                                                                                                 404
                                                                                                                                                                                                                                                                                                                                                                                                         335
                                                                                                                                                                                                                                                                                                                                                                                                                                     344
                                                                                                                                                                                                                                                                                                                                                                                                                                                              275
                                                                                                        704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       y Match
Local Similarity 98.1%;
hes 521; Conservative
                                                                                                      ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                              aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                 gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattagatttgctgtacc 334
               cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                  tgcagggagtgtgagagcggctccttcaccgcttcagaaaacccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                   GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
 AATGTTAAGGGCACTGAGGACTCAGGCACCACAGCCGGTGCTGCCCCCAGGT
                                                     TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCTACCCCAGATTGAG
                                                                 tcctgtagtaactgtaagaaaagcctggagtgcacgaagttgtgcctacccccagattgag
                                                                                                                                                                                                                                                                    AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                         TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                              AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P, Turner M, Brennan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  473..532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                extracellular domain of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 506; DB 3; Le
Pred. No. 0.00e+00;
0; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 2062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
 874
                          804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                    454
                                                                                                                                                                                                                                                                                                                                                                                                                                   403
                                                                                                                                                                                     634
                                                                                                                                                                                                                                         574
                                                                                                                                                                                                                                                                                              514
                                                                                                                                                                                                                                                                                                                                                                              463
                                                                                                       763
                                                                                                                                  694
                                                                                                                                                                                                                643
                                                                                                                                                                                                                                                                     583
                                                                                                                                                                                                                                                                                                                          523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۲.
```

```
δÃ
                                                                                        B
Š
                              밁
                                                                                                                   Š
                                                                                                                                                                                                                                                                   PT New polypeptide capable of binding human TNF alpha - comprises
pt first three cystelne-rich subdomains of TNF alpha receptor for
pt treating autoimmune disease, septic shock, HIV etc.
Claim 4; Fig 1; 43pp; English.
Claim 4; Fig 1; 43pp; English.
Chis sequence encodes human TNF-alpha 55kD receptor A placenta cDNA
Claim 4; Fig 1; 43pp; English.
Chis sequence encodes human TNF-alpha 55kD receptor A placenta cDNA
Claim 4; Fig 1; 43pp; English.
Chis sequence encodes human TNF-alpha 55kD receptor A placenta cDNA
Claim 4; Fig 1; 43pp; English.
Chis sequenced The coding region of the process were then
claim 5 sequenced. The coding region of the majority of the human TNF-alpha
CSkD receptor was isolated as an EcoRI fragment encoding 374 amino
Cacids, and cloned into a mammalian cell expression vector, resulting
Canjineering a termination codon just prior to the transmembrane
Commain. PCR with primers Q29237,8 generated a 300bp
Crestriction fragment which was cloned into prNFR, giving pTNFRecd.
CNA sequencing confirmed this contained the designed DNA sequence.
Chas receptor expression plasmids were then transfected
Commain. PCR with primers procession plasmids were then transfected
                                                                                                                                                                               Query Match
Best Local S
Matches 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-OCT-1991; GO1826.

18-OCT-1990; GB-022648.

(CHAR-) CHARING CROSS SU

Brennan FM, Feldmann M,

WPI; 92-167156/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /*tag= a
/product= hu
mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q24440 standard; DNA; 2062 BP.
Q24440;
Q24440;
Q5-NOV-1992 (first entry)
Encodes TNF-alpha 55kD receptor.
tumour necrosis factor alpha; extracellular binding domain;
treatment; pulmonary diseases; septic shock; HIV infection;
malaria; viral meningits; graft versus host disease;
autoimmune disease; rheumatoid arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag= b
/note= "3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sig_peptide
/*tag= f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= e
/codon= Seq:"GAC", aa:Asn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /codon- seq:"TGG", aa:Thr
mat_peptide 1258..1260
                                                                                                                                                                                                                                           See also Q24440-51, R24000, R Sequence 2062 BP; 429 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9207076-A
30-APR-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P-PSDB; R24000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon- Seq"AAG", aa:Leu
mat_peptide 1433..1435
 464
                              395
                                                            404
                                                                                          335
                                                                                                                     344
                                                                                                                                                   275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /*tag=
                                                                                                                     tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                          aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
 TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                            AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                                                                                                                                                               l Similarity
521; Conse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human
                                                                                                                                                                               44.1%;
larity 98.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TNF-alpha
1265..1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1265..1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers 156..1517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUNLEY RES CENT.
M, Gray PW, Turner MJC;
                                                                                                                                                                              Score 506; 1
Pred. No. 0.0
0; Mismatcl
                                                                                                                                                                                                                                           R24080-84,
A; 618 C;
                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                           R27585, Q29236-8
; 572 G; 44
                                                                                                                                                                                               .00e+00;
                                                                                                                                                                                                             DB 4;
                                                                                                                                                                                  9,
                                                                                                                                                                                                             Length 2062;
                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                           443 T;
                                                                                                                                                                               1;
                                                                                                                                                                                 Gaps
                                                                                                                     403
                              454
                                                            463
                                                                                                                                                   334
                                                                                        394
```

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
õ
                   밁
                               γQ
                                                    밁
                                                                       Ş
                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                            Query Match
Best Local Similarity
Matches 521; Conse
                                                                                                                                                                                                                                                          24-JAN-1991.

16-JUL-1999; 05-8976.

18-JUL-1989; US-381080.

11-DEC-1989; US-450329.

07-FEB-1990; US-479661.

(SYNE-) SYNERGEN INC.

WPI; 91-073847/11.
                                                                                                                                                                      Tumour necrosis factor inhibitor - for suppression of TNF-alpha and -beta, useful as therapeutic agent.

Disclosure: Fig 21: 142pp; English.

The sequence encodes the entire 30 kD TNF inhibitor. The clone from which the sequence was obtd. was isolated from a cDNA library prepd. from RNA form U937 cells treated with PNA/PHA. The whole gene can be inserted into expression vectors for prepn. of TNF inhibitor for use in the treatment of inflammatory and degenerative
                                                                                                                                                                                                                                                                                                                                                       Key
                                                                                                                                                                                                                                                                                                                                                                          30kD TNF
Tumour ne
                                                                                                                                                                                                                                                                                                                                                                                                    Q10883 standard;
Q10883;
                                                                                                                                                See also Q10878, Q10884 and Q10907.
Sequence 2088 BP; 439 A; 626
                                                                                                                                                                                                                                                    P-PSDB; R10986.
                                                                                                                                                                                                                                                                                                                            /*tag= a
AU9058976-A.
                                                     349
                                                                                                                                                                                                                                                                                                                                                                                            13-MAY-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                 824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                584
 464
                   409
                                    404
                                                                         344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     455
                                 aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                      tcctgtagtagctgtaagaaaagcctggagtgcacgaagttgtgcctaccccagattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACACCTGCCTC
        tgcagggagtgtgagagoggctccttcaccgcttcagaaaaccacctcagacactgcctc 468
                                                                                                                                                                                                                                                                                                                                                                 sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCCAGTGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAG
                                                                                                                                                                                                                                                                                                                                                                     NY inhibitor precursor gene in lambda-gt10-7ctnfbp. necrosis factor; inhibitor; ss.
                                                                                                           44.1%;
llarity 98.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                           (first
                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers 171..1536
                                                                                                                                                                                                                                                                                                                                                                                                            CDNA;
                                                                                                                                                                                                                                                                                                                                                                                          entry)
                                                                                                                                                                                                                                                                                                                                                                                                            2088
                                                                                                                                                                                                                                                                                                                                                                                                            ВP
                                                                                                                   Score 506; DB 2;
Pred. No. 0.00e+00;
                                                                                                            0;
                                                                                                            Mismatches
                                                                                                                                                 ü
                                                                                                                                                578
                                                                                                            9;
                                                                                                                             Length 2088;
                                                                                                                                                ဂ္
                                                                                                            Indels
                                                                                                                                               445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 804
                                                                                                           ۲,
                                                                                                           Gaps
                                                    408
                                                                       403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            634
                                  463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    514
                                                                                                           1;
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
å
                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                   Query Ma
Best Loc
Matches
                                                                                                   prodn.

Calaim 4; Fig 1; 26pp; German.

Calaim 4; Fig 1; 26pp; German.

Partial amino acid sequences were determined for the 55 and 75kD

TNF-BPs (see R11072-R11081) and oligonucleotide primers were
synthesised based on these partial sequences. The primers were used
to produce a cDNA fragment for use as aprobe to screen a human
placental cDNA bank constructed in lambda gtll. Positive clones were
identified and sequenced. DNA constructs comprising the TNF-BP coding
sequence may also contain a fragment encoding a human Ig domain.

Recombinant constructs are used to transform cells to confer
improved TNF-binding properties.
                                                                                                                                                                                                                                                                                                                               31-AUG-1990; 116707.
12-SEP-1989; CH-003319.
08-MAR-1990; CH-000746.
20-APR-1990; CH-001347.
(HOFF ) HOFFMANN-LA ROCHI
Brockhaus M, Dembic Z, Ge
                                                                                                                                                                                                                                                                                                                                                                                                                                                mat_pepti
/*tag= }
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-MAY-1991 (first entry)
Encodes human 55kD TNF-binding protein.
Tumour Necrosis Factor; binding proteins; septic
autoimmune glomerulonephritis; lymphokine; cytoki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q10955
                                                                                                                                                                                                                                                                  encoding
                                                                                                                                                                                                                                                                                          WPI; 91-081851/12.
P-PSDB; R11082.
                                                                                                                                                                                                                                                                                                                   Brockhaus M,
Schlaeger EJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sig_peptide
/*tag= a
                                                                                                                                                                                                                                                                   Insoluble tumour necrosis encoding them, useful in p
                                                                                                                                                                                                                                                                                                                                                                                                                        /product- 55kD
EP-417563-A.
                                                                                                                                                                                                                                                                                                                                                                                               20-MAR-1991.
31-AUG-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q10955;
   344
                          307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            704
                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tectgtagtaactgtaagaaaageetggagtgeaegaagttgtgeetaceeeagattgag
              gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         aatgttaagggcactgaggactcaggcaccacagt-gctgttgcccctggt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AATGITAAGGGCACTGAGGACTCAGGCACCACAGCCGGTGCTGCCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCCAGTGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          standard;
                                                    Similarity
521; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                 σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             de
                                                 44.18;
larity 98.18;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                   TNF-BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                            ROCHE
                                                                                                                                                                                                                                                                                                                               Gentz
                                                                                                                                                                                                                                                                s factor binding proteins - pharmaceutical prods. and
                                                Score 506; DB 2; Lo
Pred. No. 0.00e+00;
0; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ВP
                                                                                                                                                                                                                                                                                                                                R, Lesslauer
                                                                                                                                                                                                                                                                                                                                Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cytokine.
                                                                                                                                                                                                                                                                                                                                Lotscher
                                                                          Length
                                                 Indels

    and DNA
for antibody

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  818
                                                 ۲;
                                                 Gaps
                          366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               583
```

```
PER PROPERTY OF THE PROPERTY O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
PT New protesse capable of cleaving soluble tumour necrosis factor PT (TNF) receptor - from cell-bound TNF - receptor, useful for antagonising deleterious effects of TNF.

PT antagonising deleterious effects of TNF.

CC Expression of this receptor is regulated by shedding of the extracellular receptor fragment. The p55 TNF-R can be shed in response to different inducing agents, e.g. phorbol myristate acetate (PMA), depending on cell Ctype. The only region of the receptor whose structure affects the shedding response is the spacer region (see R75012) in the extracellular commain. This region is located close to a site of cleavage of the collecule, and links the Cys rich module to the transmembrane domain. The spacer region of the encoded protein was used to create the chimeras CC between human p55 TNF-R and murine epidermal growth factor receptor CC (EGF-R) that are represented by R75007-11. This spacer region was subjected to deletion mutations (R75013-25) and substitutions
                                                                                                                                                                                                                                                                                                                                                                                                                   12-OCT-1993; IL-107268.

(YEDA) YEDA RES & DEV CO L
Batkin M, Brakebusch C, V
WPI; 95-194342/26.

P-PSDB; R75084.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag= a
/product= p:
misc_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q90513
Q90513;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note- "possible poly-A signal"
AU94/5742-A.
04-MAX-1995.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    epidermal growth f phorbol myristate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               p55 TNF-R gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tumour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tcctgtagtaactgtaagaaaagcctggagtgcacgaagttgtgcctaccccagattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         agctgctccaaatgccgaaaggaaatggggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tgcagggagtgtgagagcggctccttcacccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               necrosis factor receptor; TNF-R; human;
rowth factor receptor; EGF-R; protease; '
'state acetate; PMA; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TNF-R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2143..2149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers 256..1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Varfolomeev
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wallach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   763
```

```
RESULT
RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 52
EP-3990
24-OCT-1990
06-APR-1990; 106624.
06-APR-1989; DE-913101.
21-APR-1989; DE-913101.
21-JUN-1989; DE-920282.
8 (BOEH) BOCHRINGER INGELHEIMINT.
A (BOEH) BOCHRINGER A, Maurer-Fo
                                                                                                                                                                         /*tag= a
/label=huTNF-R
EP-393438-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (R75026-47). Of the spacer region, the most important residues are Asn 172, Val 173, Lys 174 and Gly 175, with Val 173 being the most important of these. The shedding of the receptor is independent of the side chain identity of these residues, with the exception of a limited dependence on the identity of Val 173. Mutations which alter the conformation of the protein adversely effect the shedding process. The mutations shown in R75013-47 were introduced in order to create an inhibitor of a protease that is capable of cleaving the soluble TNF-R from the cell bound TNF-R. Fragments of these inhibitors can be seen in R75017-9, R75035-5 and R75042-3. These protease inhibitors can be used for enhancing TNF function.
                                                                                                                                                                                                                                                                                                      JT 8
Q06285 standard; DNA; 2141 BP.
Q06285;
29-JAN-1991 (first entry)
Human Tumour Necrosis Factor-Receptor cDNA insert.
Tumour necrosis factor binding protein; TNF-BP; TN
lambdaTNF-R2; raTNF-R8; ss.
                                                                                                                                                                                                                                                     Sg
                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           aatgttaagggcactgaggactcaggcaccacagt-gctgttgcccctggt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tcctgtagtaactgtaagaaaagcctggagtgcacgaagttgtgcctaccccagattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATGTTAAGGGCACTGAGGACTCAGGCACCACAGCCGGTGCTGCCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             521;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14.18;
Similarity 98.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2175 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                  Location/Qualifiers 213..1577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         474 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 506; DB 15;
Pred. No. 0.00e+00;
0; Mismatches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         642 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>ဂ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                             TNF-receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'n
```

4

Maurer-Fogy

Stratowa

```
RESULT ON ACCORD FOR THE FORM OF THE FORM 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SCCCCCBPPDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
/*tag= b
mat_peptide
/*tag= c
misc_RNA
/*tag= d
                                                                               /product= ty
sig_peptide
/*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA encoding TNF binding protein and TNF- receptor - used in tumour treatment and to understand mechanismsm to TNF action Disclosure; Fig 91(1-2); 51pp; German.

raTNF-R8 (Q06284) was used to screen the HS913T cDNA library.

LambdaTNF-R2 encodes the complete human TNF-R2 and was used to construct a plasmid (pADTNF-R) expressing the product the same as pADTNF-BP (see Q06282).

See also Q06282-Q06285.

Sequence 2141 BP; 455 A; 633 C; 593 G; 460 T;
                                                                                                                                                                                                                                                                                              Type I TNF receptor.
Tumour Necrosis Factor; TNF; binding
                                                                                                                                                                                                                                                                                                                                            Q12215 standard;
Q12215;
12-SEP-1991 (fir
                                                                                                                                                                                                                                    terminator
                                                                                                                                                                                            /noté= "in-frame
                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        333 gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tcctgtagtagctgtaagaaaagcctggagtgcacgaagttgtgcctaccccagattcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcaccttcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AATGTTAAGGGCACTGAGGACTCAGGCACCACAGCCGGTGCTGCCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 aatgttaagggcactgaggactcaggcaccacagt-gctgttgcccctggt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tgcagggagtgtgagagcggctccttcaccgcttcagaaaacccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATAGTGTGTCCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        90-321987/43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      520;
                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    h 43.9%;
Similarity 97.9%;
520; Conservative
                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                319..1620
                                                                                                          INF receptor 256..318
                                                                                                                                                                        termination 256..1620
                                                                                                                                                                                                                                    Location/Qualifiers 244..246
                                                                                                                                                                                                                                                                                                                                                                                      DNA; 2176
                                                                                                                                                                                                                                                                                                                                                                                      ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 504; DB 1;
Pred. No. 0.00e+00
                                                                                                                                                                                            codon*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                  protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10;
                                                                                                                                                                                                                                                                                                  TBP-I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۲,
```

```
Ş
                                             밁
                                                                 20
                                                                                             밁
                                                                                                                Š
                                                                                                                                            밁
                                                                                                                                                                  Š
                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                닭
                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 520; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  polyA_signal

/*tag= m

Ep-433900-A

26-JUN-1991

13-DEC-1990;

13-DEC-1989;

13-JUL-1990;
                                                                                                                                                                                                                                                             Recombinant tumour necrosis factor binding protein I - prepd. by transfecting eukaryotic cells with vector contg. deoxyribonucleic acid encoding human type T TNF receptor or soluble domain Disclosure; Fig 1(D); 30pp; English.

The Tumour Necrosis Factor Binding Protein I is the soluble form of the Tumour and constitutes a fragment of the cell surface form of this receptor and constitutes a fragment of the cell surface form of this receptor, corresp. to its extracellular domain. There is no characteristic poly(A) addition signal near the 3' end of the cDNA. The sequence ACTAAA (tag m) may serve as an alternative to this signal, but with low efficiency. See also Q12212-15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_unit
/*tag= k
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_unit
/*tag= j
                                                                                                                                                                                                                                                                                                                                                                                                                                          13-DEC-1990; 124133.
13-DEC-1989; IL-092697.
12-JUL-1990; IL-095064.
(YEDA) YEDA RES & DEV CO LTD.
Wallach D, Nophar Y, Kemper O,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /number= 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                            P-PSDB; R12550
                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 91-186774/26.
                                                                                                                                                                                                                                                                                                                                                                                                                                 Aderka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_unit
/*tag= l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /label= transmembrane_domain repeat_unit 385..504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag= g
/note= "TBP-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "TBP-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /number= 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /number= 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note- "TBP-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Longer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /label= soluble_domain
/note= "may be 2 codons
                                                                                                                                                                                          376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /*tag=
                                                                       464
                                                                                              496
                                                                                                                     404
                                                                                                                                                                   344
                                                                                                                                  aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                  agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                   tgcägggagtgtgagageggctccttcaccgcttcagaaaaccacctcagacactgcctc
cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                    AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                       AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                      TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                 ָט
                                                                                                                                                                                                               43.9%;
larity 97.9%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         derived sequence*
889..957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           derived sequence"
850..858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              derived sequence"
583..627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2145..2150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                634..756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   505..633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 376..414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              757..858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        codons shorter
                                                                                                                                                                                                               Score 504; DB 2;
Pred. No. 0.00e+00;
0; Mismatches 10
                                                                                                                                                                                                                                                                                                                                                                                                                                             Engelmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          or
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hew
                                                                                                                                                                                                                                                                                                                                                                                                                                              ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          codons
                                                                                                                                                                                                                                                                                                                                                                                                                                               Brakebusch
                                                                                                                                                                                                                 10;
                                                                                                                                                                                                                                       Length 2176;
                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                   cell surface
                                                                                                                                                                                                                 ۳
                                                                                                                                                                                                                 Gaps
                                                                                                                                          495
 675
                       583
                                             615
                                                                      523
                                                                                              555
                                                                                                                    463
                                                                                                                                                                  403
                                                                                                                                                                                                                 ۳.
```

```
RESOLT BE SEED OF SEED
                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                          Ş
                                                                                                                               밁
                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PD 15-FEB-1995; U09576.
PF 28-JUL-1995; U09576.
PR 05-AUG-1994; US-286740.
PR 05-AUG-1994; US-286740.
PR (GETH) GENENTECH INC.

PR (GETH) GENENTECH INC.

PR (GETH) GENENTECH INC.

PI (Towley CW;

PR WPI; 96-129407/13.

PR WPI; 96-129407/14.

PR WPI; 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1725
                                                                                                                                                                                                                                                                                                                                                                                      1785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DHFR/intron (WTrasSD) Therigg dicistronic vector.
Recombinant host cell; dihydrofolate reductase; selectable marker;
DHFR; ras splice donor; dicistronic vector; gene expression;
immunoadhesin; Therigg; tumour necrosis factor; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
WO9604391-A1.
         1965
                                                                                                                                                                                                                                                              1845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      pools).
                                                                                                                                                                                                                                                                                                                        404
                                                                                                                                                                                                                                                                                                                                                                                                                                                    344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local 509;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   644
                                                                                                                                                                                            464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               584
                                                                                                                                                                                      tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc 1904
                                                                                                                                                                                                                                                                                                              gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc 1784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    aatgttaagggcactgaggactcaggcaccacagt-gctgttgcccctggt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tcctgtagtaactgtaagaaaagcctggagtgcacgaagttgtgcctaccccagattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATAGTGTGTCCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATGTTAAGGGCACTGAGGACTCAGGCACCACAGCCGGTGCTGCCCCAGGT
cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         43.98;
llarity 99.08;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1729 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 504; DB 18;
Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1826 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1681 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>ა</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 6889;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Η,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  795
                                                                                                                        1964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            643
                                                                 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
RESULT OF COLOR RESULT OF COLO
                                                                                                                                Ş
                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                     δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
Ş
                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-APR-1993; 106981.
03-MAY-1992; IL-101799.
(YEDA ) YEDA RES & DEV C
Brakebusch C, Wallach D
WPI; 93-353057/45.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       disease, septic shock, etc.

Claim 2; Figure 1; 17pp; English.

Modification of the tumour necrosis factor receptor by mutation deletion modulates signal transduction and/or cleavage effected the receptor. This modulation of activity can also be achieved using effector proteins which interact with the TNF receptor.

Molecules which interact with the TNF receptor or the effector proteins can be used to treat or prevent diseases associated wit TNF activity e.g. autoimmune disease; rheumatoid arthritis; graft rejection; graft vs. host disease or septic shock. They can also be used to treat overdoses of exogenous TNF.

Sequence 2170 BP; 474 A; 657 C; 584 G; 455 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      O50870 standard; DNA; 2170 BP.
O50870;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /product=
EP-568925-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Modulating activity of tumour necrosis factor receptor - using peptide(s), antibodies, etc. which interact with critical regions of receptor or effector protein, for controlling auto-immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Key
CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P-PSDB; R42197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-NOV-1993;
29-APR-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag=
   464
                                                                    496
                                                                                                                                        404
                                                                                                                                                                                                    436
                                                                                                                                                                                                                                                                            344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            584
gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       aatgttaagggcactgaggactcaggcaccacag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tcctgtagtaactgtaagaaaagcctggagtgcacgaagttgtgcctaccccagattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            519;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 43.8%;
Similarity 97.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tumour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers 256..1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          necrosis factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>ი</u> ც
                                                                                                                                                                                                                                                                                                                                                                                                         Score 502; DB 9;
Pred. No. 0.00e+00;
0; Mismatches 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2238
                                                                                                                                                                                                                                                                                                                                                                                                                 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2170;
                                                                                                                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d with graft
                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  βg
                                                                555
                                                                                                                                                                                                    495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2084
                                                                                                                                    463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    703
523
```

```
밁
                                        Š
                                                                  밁
                                                                                            ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                Query Match
Best Local
                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q24441 standa
Q24441;
Q5-NOV-1992
                                                                                                                                                                                                                                                    This sequence encodes the designed TNF-alpha 55kD receptor derivative, as present in pTNFRecd. This was produced as described 024441. This derivative lacks the 81 carboxyl terminal residues of the cytoplasmic domain. The derivative could be used in the regulation of TNF-alpha mediated responses by binding and sequestering human TNF-alpha e.g. in the treatment of pulmonary diseases, septic shock, HIV infection, malaria, viral meningitis,
                                                                                                                                                                                                                                                                                                                                                                                                               18-OCT-1991; G01826.
18-OCT-1990; GB-022648.
(CHAR-) CHARING CROSS SUNLEY RES
Brennan FM, Feldmann M, Gray PW,
WPI; 92-167156/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-NOV-1992 (first entry)
Encodes truncated TNF-alpha, 55kD receptor (197 amino acids).
tumour necrosis factor alpha; extracellular binding domain;
treatment; pulmonary diseases; septic shock; HIV infection;
malaria; viral meningits; graft versus host disease;
                                                                                                                                                                                                                                                                                                                                                New polypeptide capable of binding human TNF alpha first three cysteine-rich subdomains of TNF alpha retreating autoimmune disease, septic shock, HIV etc. Example; Fig 7; 43pp; English
                                                                                                                                                                                                    See also Q24440-51, R24000, R24080-84, R27585, Q29236-8
Sequence 608 BP; 148 A; 159 C; 165 G; 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens. W09207076-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            autoimmune disease; rheumatoid arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                         P-PSDB; R24080
                                                                                               344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           524
                249
                                          404
                                                                   189
                                                                                                                         129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         736
                                                                                         tcctgtagtaactgtaagaaaagcctgcagtgcacgaagttgtgcctaccccagattgag
tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagaacactgcctc
                                                       aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        aatgttaagggcactgaggactcaggcaccacagt-gctgttgcccctggt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ttccagtgcttcaattgcagcctctgcctcaatgcgaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                        AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AATGTTAAGGGCACTGAGGACTCAGGCACCACAGCCGGTGCTGCCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                            versus host disease and autoimmune diseases,
                                                                                                                                                  l Similarity
474; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       standard;
                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA;
                                                                                                                                                              40.8%;
98.8%;
                                                                                                                                                             Score 468; DB 4;
Pred. No. 0.00e+00;
                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                Turner MJC
                                                                                                                                                Mismatches
                                                                                                                                                                         Length 608
                                                                                                                                                6; Indels
                                                                                                                                                                                                                                                                                                                                                                            receptor
                                                                                                                                                                                                                                          esp.
                                                                                                                                                                                                                                                                                                                                                                           ceptor for
                                                                                                                                                                                                      Η.
                                                                                                                                                                                                                                          rheumatoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                905
                                                                                                                                                0
                                                                                                                                               Gaps
                                        463
                                                                  248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        583
                                                                                                                                                                                                                                                                                                                        'n
                                                                                                                                                0
```

```
õ
                                    몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
Š
                                                                     Š
                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                         treating autoimmune disease, septic shock, HIV etc.

Example: Fig 11: 43pp: English.

This sequence encodes the designed TNF-alpha 55kD receptor

This sequence encodes the designed TNF-alpha 55kD receptor

derivative, as present in pdeltaIV. This construct was generated by

cloning of the BglII/HindIII digested product of a PCR using

primers 5A and 4D into BglII/HindIII 5'-deltaCla. This introduced

a termination codon after amino acid 167, to yield pdeltaIV.

This derivative lacks the membrane proximal 4th subdomain, yet

retains the ability to bind TNF-alpha with high affinity

(10power8 - 10power9 Mpower-1) The deriv. can be used in the

regulation of TNF-alpha mediated responses by binding and

crequestering human TNF-alpha e.g. in the treatment of pulmonary

diseases, septic shock, HIV infection, malaria, viral meningitis,

graft versus host disease and autoimmune diseases, sep. rheumatoid

arthritis. The deriv. is given at 10-100ug/dose.

See also Q24440-51, R24000, R24080-84, R2585, G29236-8
                                                                                                                                                             Query Match
Best Local :
                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q24445;
Q24445;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-NOV-1992 (first entry)
Encodes truncated TNF-alpha 55kD receptor (165 amino acids).
Encodes truncated TNF-alpha; extracellular binding domain;
tumour necrosis factor alpha; extracellular binding domain;
treatment; pulmonary diseases; septic shock; HIV infection;
malaria; viral meningits; graft versus host disease;
autoimmune disease; rheumatoid arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New polypeptide capable of binding human TNF alpha - comprifirst three cysteine-rich subdomains of TNF alpha receptor treating autoimmune disease, septic shock, HIV etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-OCT-1991; G01826.
18-OCT-1990; GB-022648.
18-OCT-1990; GB-022648.
(CHAR-) CHARING CROSS SUNLEY RES CENT.
Brennan FM, Feldmann M, Gray PW, Turner MJC;
WPI; 92-167156/20.
                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9207076-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P-PSDB; R24084.
   404
                  181 aagtgccacaaaggaacctacttgtacaatgactgtccaggcccgggggaggatacggac
                                                                                         121 gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         764 TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tcctgtagtaactgtaagaaaagcctggagtgcacgaagttgtgcctaccccagatttag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCCAGTGCTTCAATTGCACCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cgggacaccgtgtgtgggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACCGAC
                                                                     GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                          l Similarity
379; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standard;
                                                                                                                                                                                                                504 BP;
                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA;
                                                                                                                                                           32.7%;
99.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     504
                                                                                                                                                                                                                ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP.
                                                                                                                                       Score 375; DB 4; I
Pred. No. 1.89e-267;
0; Mismatches 4;
                                                                                                                                                                                                                137
                                                                                                                                                                                                                ü
                                                                                                                                                                                                                ູດ
                                                                                                                                          .
                                                                                                                                                                             Length
                                                                                                                                          Indels
                                                                                                                                                                                                                107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  comprises
                                                                                                                                                                                                                H
                                                                                                                                          0
                                                                                                                                          Gaps
                                  240
                                                                     403
                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    428
 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         583
                                                                                                                                          0
```

. .

```
RESULTATION OF THE PROPERTY OF
                                                                                       Š
                                                                                                                                                 뮹
                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                    뭥
                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     treating autoimmune disease, septic shock, HIV etc.

Example: Fig 8: 43pp: English.

This sequence encodes the designed TNF-alpha 55kD receptor derivative, as present in pdeltaI. This construct was generated by joining PCR fragments by means of overlaps introduced into the primers used for PCR. Gel purified products of PCR's using 5'Cla, IA, IB, and 5D primers were mixed and subjected to further amplification using 5'Cla and 5D as primers. The resulting fragment was digested with ClaI and BgIII and cloned into ClaI/BgIII digested pTMFRecd, to yield pdeltaI, containing the sequence given. This derivative could be used to regulate TNF-alpha mediated responses by binding and sequestering human TNF-alpha e.g. in the treatment of pulmonary diseases, septic shock, HIV infection, malaria, viral meningitis, graft versus host disease and autoimmune diseases, esp.
                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-APR-1992.
18-OCT-1991; G01826.
18-OCT-1990; GB-022648.
(CHAR-) CHARING CROSS SUI
Brennan FM, Feldmann M, (WPI; 92-167156/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-NOV-1992 (first entry)
05-NOV-1992 (first entry)
Encodes truncated TNF-alpha 55kD receptor (155 amino acids).
Encodes truncated TNF-alpha; extracellular binding domain;
treatment; pulmonary diseases; septic shock; HIV infection;
malaria; viral meningitis; graft versus host disease;
autoimmune disease; rheumatoid arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New polypeptide capable of binding human TNF alpha - comprifirst three cysteine-rich subdomains of TNF alpha receptor treating autoimmune disease, septic shock, HIV etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q24442;
05-NOV-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P-PSDB; R24081.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           024442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                See also Q24440-51,
                                                                                             527
                                                                                                                                                                                                          467
                                                                                                                                                                                                                                                                 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        464
                                                                                 tyctccaaatyccgaaaggaaatygytcagytygagatctctttttgcacagtygaccyg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            agagagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctcagc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
gacaccgtgtgtgggctgcaggaagaaccagtaccggcattattggagtgaaaaccttttc
                                                                                                                                                                                                       AGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCCAGTGCTTCAATTGCACCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGTCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGACACCGTGTGGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard;
                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                 30.1%;
larity 98.3%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                 8.
R24000, R24080-84,
126 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUNLEY RES CENT.
4, Gray PW, Turner
                                                                                                                                                                                                                                                                                                              Score 345; DB 4; I
Pred. No. 1.16e-243;
0; Mismatches 6:
                                                                                                                                                                                                                                                                                                                                                                                                                                    , R27585,
132 c
                                                                                                                                                                                                                                                                                                                                                                                                                                       ဂ္
                                                                                                                                                                                                                                                                                                                                                                           Length 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q29236-8
                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                 106 T;
                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     480
                                                                                                                                              237
                                                                                                                                                                                                       526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        523
                                                                                       586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     583
```

```
RESULT 15

RESULT 15

AC T76770;

AC HUMAN GDP-L-fi

KW Alpha 11v

KW Alpha 11v

KW Alpha 11v

KW Stomach

KW Carbohy

KW GDP-L-fi

KW Alpha 11v

KW Alpha 11v

KW Alpha 11v

KW GDP-L-fi

KW CARDOHY

CO Chimeri

FH Key

FH FY FY FY FY FY

FH FY FY FY

FY FY FY

FY FY FY

FY CANDET

FY CONSTITUTE

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                          Example 2; Columns 25-28; 24pp; English.

CA claimed transgenic mouse expresses, in its intestinal epithelial cells, the enzyme human GDP-L-fucose:beta-D-galactoside 2-alpha-L-fucosyltransferase (also called alpha 1, 2 FT) or human GDP-L-fucose: beta-D-N-acetylglucosamide 3/4-alpha-L-fucosyltransferase (also called alpha 1, 2 FT) or human GDP-L-fucose: beta-D-N-acetylglucosamide 3/4-alpha-L-fucosyltransferase (also colled alpha 1, 3/4 FT). The enzyme is expressed under the CC control of a gut epithelial cell-specific promoter and Helicobacter pylori adheres to the transgenic cells. The transgenic mouse and intestinal epithelial cells from it are useful as models for screening compounds for the ability to inhibit adhesion of H. pylori to gut epithelial cells. The first 617 nucleotides of the present chimeric sequence encode the promoter from rat liver fatty acid binding protein CC sequence encode the promoter from rat liver fatty acid binding protein CC lineage of the mouse gastric epithelium, to proliferating and non-cc proliferating cells in intestinal crypts, as well as to the four proliferating cells in intestinal crypts, as well as to the four corresponds to exon 1 of the human growth hormone (hGH) gene, into which a sequence coding for a human growth hormone (hGH) gene, into
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-SEP-1997 (first entry)

15-SEP-1997 (first entry)

Rat Fabpl gut-specific promoter and human growth hormone exon 1.

Ruman GDP-L-fucose:beta-D-galactoside-2-alpha-L-fucosyltransferase;

GDP-L-fucose:beta-D-N-acetylglucosamide 3/4-alpha-L-fucosyltransferase;

alpha 1,2 FT; alpha 1,3/4 FT; tissue-specific promoter;

rat liver fatty acid binding protein; transgene; transgenic mouse;

animal model; intestinal adhesion; Helicobacter pylori infection;

stomach; small intestine; gut; epithelial cell; surface receptor;

carbohydrate antigen; gastritis; peptic ulcer; neoplasia;

gastric adenocarcinoma; Lewis antigen; fucosylation; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 97-258275/23.

Animal model for Helicobacter pylori infection - comprising Animal Manifecture - comprising Animal Manifec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the human growth hormone desirable for cDNA coding fucosyltransferase to be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag= a
/note= "Corresponds
the rat liver fatty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-JUL-1994; 273411.
11-JUL-1994; US-273411.
(UNIW ) UNIV WASHINGTON
Falk B. GORGON II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US5625124-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /number= 1
/note= "Corresponds to nucleotides +3 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             promoter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chimeric -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tgtagtaactgtaagaaaagcctggagtgcacgaagttgtgcctaccccagatttag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggagaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of the hGH gene"

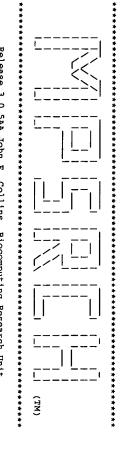
124-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gordon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus sp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              620..2771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1..617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hormone (hGH)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           to nucleotides -596 acid binding protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ō,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               intestinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             646
```

```
Ş
                                                              밁
                                                                                     Ş
                                                                                                             밁
                                                                                                                                      δÃ
                                                                                                                                                             В
                                                                                                                                                                                     Š
                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                         88888888
Ş
                       밁
                                                                                                                                                                                                                                                                                       Query Match 25.1%; Score 288; DB 31; Length 2771; Best Local Similarity 95.6%; Pred. No. 1.27e-198; Matches 323; Conservative 0; Mismatches 11; Indels 4
                                                                                                                                                                                                                                                                                                                                   inserted. No hGH will be produced because the initiator Met codon and the first translation stop codon will be from the hFT sequence and there is no ribosome re-entry sequence. The hGH exon 1 ensures efficient splicing of the transgene primary transcript, improves stability of the cytoplasmic hFT mRNA and allows transgene expression to be monitored by in situ hybridisation using a digoxigenin-labelled hGH oligonucleotide.

Sequence 2771 BP; 666 A; 718 C; 704 G; 683 T;
                                                                                                                                                                                                                                      306
                       976
                                           916
                                                                                                                                            126
                                                                                                                                                                                                                   740
                                                                                                                                                                     798
                                                                                                                                                                                      tatcgccatgtaagcccagtatg-gcc-aatctcagaaagctcctggtccctggagggat 855
            gcctgctctgcctgccctggcttcaagagggcagtgcc 1013
GCCTGCTCTGCCTGCCTTCAAGAGGGCAGTGCC
343
                                                                                                                                                                                                                                                                                        Indels 4;
                                                                                                                                                                                                                                                                                        Gaps
```

Search completed: Wed May 6 14:21:41 1998 Job time: 155 secs.

· · . .



Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_nn n.a. - n.a. database search, using Smith-Waterman algorithm

Run on: Wed May 6 14:00:59 1998; MasPar time 1055.78 Seconds 1320.756 Million cell updates/sec

Tabular output not generated.

Description: Perfect Score: N.A. Sequence: Title: >US-08-804-166-5 (1-1147) from US08804166.seq 1147

Comp: 1 TCGAGATGGCTACAGGTAAG......AATCTTAAGGATCCCTCGAG 1147
AGCTCTACCGATGTCCATTC......TTAGAATTCCTAGGGAGCTC

Scoring table: TABLE default Gap 6

Nmatch

STD :

Dbase 0;

Query 0

Searched: 1610801 seqs, 607859669 bases x 2

Minimum Match 0% Listing first 45 summaries

Post-processing:

Database: embl-est

Database:

1:em\_est1 2:em\_est2 3:em\_est3 4:em\_est4 5:em\_est5 6:em\_est6 7:em\_est8 8:em\_gss 9:em\_est13 genbank-est 11:gb\_est2 12:gb\_est3 13:gb\_est4 14:gb\_est5 10:gb\_est1 11:gb\_est7 17:gb\_est8 18:gb\_est9 19:gb\_est10 20:gb\_est11 21:gb\_sts 22:gb\_est12 24:gb\_est13 25:gb\_est14 26:gb\_est15 27:gb\_est16 28:gb\_est17 29:gb\_est18 30:gb\_est19 31:gb\_est20

Statistics: Mean 11.165; Variance 1.901; scale 5.873

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

Result No.	Score	Query Match	Length DB	DB DB	ID	Description	Pred. No.
ц	262	22.8	373	23	HUM505B08B	Human placenta cDNA 5'	0.00e+00
2	262	22.8	379	23	C18240		0.00e+00
ω	262	22.8	392	11	R76249	y172b05.rl Homo sapien	0.00e+00
4	261	22.8	423	12	н00861	yj31h01.rl Homo sapien	0.00e+00
5	262	22.8	464	23	C17209	Human placenta cDNA 5'	0.00e+00
თ	262	22.8	467	1	R71429	yi51d03.rl Homo sapien	0.00e+00
7	260	22.7	433	11	R23843	yh48c04.rl Homo sapien	0.00e+00
8	260	22.7	452	12	H00781	yj30d01.rl Homo sapien	0.00e+00
9	258	22.5	478	23	C17142	Human placenta cDNA 5'	0.00e+00
10	255	22.2	330	23	C18403	Human placenta cDNA 5'	0.00e+00
11	254	22.1	458	11	R77385	yi75dll.rl Homo sapien	0.00e+00
12	250	21.8	482	12	H03289	yj44h10.rl Homo sapien	0.00e+00
13	249	21.7	336	23	HUM530G10B	Human placenta cDNA 5'	0.00e+00

			ი	a						a			a					a													ი
45	44	43	42	41	40	39	38	37	36	<u>3</u> 5	34	ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14
193	197	198	198	198	201	204	205	205	205	207	207	212	216	216	217	218	218	219	220	220	221	221	223	228	229	231	231	230	232	236	238
16.8								17.9								٠					٠										
								393 11																							
R27121	R34458	R68866	AA677403	H04324	W01919	HUM525D05B	N57230	R33285	R23453	AA704477	HUM511F08B	T49525	AA778170	R33236	H77743	HSC32B021	T48916	AA777267	H94810	HUM505C02B	R23095	R79875	AA441787	н01069	H00795	H47149	R65664	W86567	C18044	C17966	AA779136
.rl Homo	.rl Homo	ï	zj62g07.sl Soares feta	yj20g12.s1 Homo sapien	za35c04.rl Soares feta	lacenta c	.rl Homo	.rl Homc	.rl Homo sa	Soar	lacenta c	.r1	s1 Soare	1 Homo	1	ns part	.rl Homo se	s1	.rl Soares	lacenta cDN	.rl Homo	ŗ	.sl Soare	.rl Homo	.rl Homo	.rl Homo	.rl Homo		lacenta cDNA	Ä	zj46hll.sl Soares feta
•		٠	0.00e+00	0.00e+00	0.00e+00		٠	0.00e+00	0.00e+00	٠	0.00e+00	•		0.00e+00		0.00e+00		0.00e+00						•	0.00e+00	•		0.00e+00	•	Ġ	

# ALIGNMENTS

	COMMENT	TITLE JOURNAL	REFERENCE AUTHORS	TITLE JOURNAL		REFERENCE AUTHORS		SOURCE	NID KEYWORDS	ACCESSION	RESULT 1 LOCUS
Tsutomu Fujiwara Otsuka GEN Research Institute Otsuka Pharmaceutical CoLtd 463-10 kagasuno Kawauchi-cho Tokushima, Tokushima 771-01 Japan Japan Japan Japan Japan Japan	Fujiwara, Otsuka G Co.,Ltd; 463-10 Ke Co.,Etd: 0886-65 Japan (Tel:0886-65 Submitted (30-May-	Direct Submission Submitted (30-MAY-	<pre>2 (bases 1 to 373 Fujiwara,T.</pre>	Unpublished(004) Unpublished (1995)	Okuno, S., Ozaki, K., Shimizu, F., Shi Takaichi, A., Takeda, S., Watanabe, T. Maekawa, H., Shin, S. and Nakamura, Y.	1 (bases 1 to 373) Fujiwara,T., Hirano	Eukaryotae; mitoch Vertebrata; Mammal	HOMO Sapiens CDNA mRNA (#6518). HOMO Sapiens	g968208 EST; EST(expressed known(May 29,1995).	Human placenta cDN D58574	ним505в08в 373
h Institute .cal Co.,Ltd .wauchi-cho .ma	Fujiwara, Ótsuka GEN Résearch Institute, Otsuka Pharmaceutical Co., Ltd; 463-10 Kagasuno Kawauchi-cho, Tokushima, Tokushima 771-01, Japan (Tel: 10886-65-2888, Fax: 0886-37-1035) Submitted (30-May-1995) to DDBJ by:	Direct Submission Submitted (30-MAY-1995) to the DDBJ/EMBL/GenBank databases, Tsutomu	3		Okuno,S., Ozaki,K., Shimizu,F., Shimada,Y., Shinomiya,H., Takaichi,A., Takeda,S., Watanabe,T., Takahashi,E., Hirai,Y., Maekawa,H., Shin,S. and Nakamura,Y.	) O,H., Katagiri,T.,	Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Mammalla; Eutherla; Primates; Catarrhini; Hominidae;	Homo sapiens cDNA to mRNA, clone_11b:Clontech human placenta mRNA (#6518). Homo sapiens	sequence tag); Human placenta; similar	Human placenta cDNA 5'-end GEN-505B08. D58574	bp mRNA
	te, Otsuka Ph , Tokushima, 1035)	MBL/GenBank			da,Y., Shino Takahashi,E.	Kawai,A., Ku	Metazoa; Ch tes; Catarrh	Clontech hum	an placenta;	•	EST
	armaceutical Tokushima 771-01,	databases. Tsutomu			miya,H., , Hirai,Y.,	ga,Y., Nagata,M.,	ordata; ini; Hominidae;	an placenta polyA+	similar to		21-MAY-1996

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                    TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
 Query Match
Best Local S
Matches 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Y Match 22.8%;
Local Similarity 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTAC 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGGTAGCTAAATCATATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA 226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC 166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTGTTATTATCACAAATCTTAA 1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTGTTATTATCACAAATCTTAA 308
                                                                                                                                                                       Submitted (24-JUN-1996) to the DDBJ/EMBL/GenBank databases. Tsutomu Fujiwara, Otsuka GEN Research Institute, Otsuka Pharmaceutical Co., Ltd; 463-10 Kagasuno Kawauchi-cho, Tokushima, Tokushima 771-01, Japan (Tel:+81-886-65-2888, Fax:+81-886-37-1035)
                                                                                                                                                                                                                                                                                                     Fujiwara,T., Hirano,H., Hishigaki,H., Horie,M., Kawai,A., Kyushiki,H., Nagata,M., Okuno,S., Ozaki,K., Shimizu,F., S Shinomiya,H., Suzuki,M., Takaichi,A., Takeda,S., Watanabe Maekawa,H., Nakamura,Y. and Takahashi,E.
                                                                                                                                                                                                                                                                             Otsuka cDNA project Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fax
                                                                                                                                                                                                                                      Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human placenta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C18240
                                                                                                                                                                                                                                                    Fujiwara,T.
                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                Similarity
                                                                                                                                                                                                                                                                                                                                                                                              Vertebrata;
                                                                                                                                                                                                                                                              (bases 1 to 379)
                                                                                                                                                                                                                                                                                                                                                                      (sites)
 22.8%;
llarity 99.6%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94
                                                                          94
                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST(expressed sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0886-37-1035.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="Clontech human placenta polyA+ mRNA (#6518)" 88 \text{ c} 84 \text{ g} 107 \text{ t}
                                                                                                    /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="559D08"
                                                                          /tissue_type="placenta"
95 c 85 g 1
                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                               Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                           mitochondrial eukaryotes; Metazoa; Chordata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                               Hirano, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                      placenta cDNA to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA 5'-end GEN-559D08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ģ
Score 262; DB 23;
Pred. No. 0.00e+00;
1; Mismatches C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 262; DB 23; Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                     tag); Human placenta
to mRNA, clone:559D08
                                                                         104
                                                                         c+
                                                                                                                                                                                                                                                                                                                         Takeda, S., Watanabe, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST
                            Length 379;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 373;
                                                                         \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                         others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-SEP-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
 0
 Gaps
                                                                                                                                                                                                                                                                                                                                   Shimada, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . 1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              993
 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1114
                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCAGTGCATGGGCTGCTGCTTCTAGAGCATATCCCACTCCACTARGGTCCAAGAAGAC 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTGCCCAGAATGCACGCTACAGGAAAACCCCATTCTTCTCCCCAGCCGGGTGCCCCAATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTGTTATTATCACAAATCTTAA 1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TIGITATIATCACAAATCITAA 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichthy Saccopterygii; Choanata; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 392)
1 (bases 1 to 392)
Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M., Hallier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M., Hallier, L., Clark, N., T., Ling, M., Clark, N., Clark, 
                                                                                                                                                                                                                                                                                          Email: est@watson.wustl.edu
High quality sequence stops: 328
Source: IMAGE Consortium, LLNL
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          y172b05.rl Homo sapiens cDNA clone 144753 3' similar to gb:V00518 GLYCOPROTEIN HORMONES ALPHA CHAIN PRECURSOR (HUMAN);.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The WashU-Merck EST Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Mari
Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F.,
Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library went through one round of normalization. Library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Washington University Scho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WashU-Merck EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              constructed by Bento Soares and M.Fatima Bonaldo.
                                                                                                                                         100
                                                                                                                                         9
                                                                                                                                  /organism="Homo sapiens"
/clone="144753"
90 c 89 q 11:
                                                                                                                                                                                                                                   Location/Qualifiers
1. .392
   22.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Project
   Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           School of Medicine way, Box 8501, St. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA
      262; DB 11;
No. 0.00e+00;
                                                                                                                                         112
                                                                                                                                         rt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Louis,
                                  Length 392
                                                                                                                                         others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Marra, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Osteichthyes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        933
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCAGTGCATGGGCTGCTGCTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTGTTATTATCACAAATCTTAA 1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACT 933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCCAGCCGGGTGCCCCAATACT 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTGTTATTATCACAAATCTTAA 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTAC 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTTAGCTAAATCATATAA 214
                                                                                    High gality sequence stops: 344
Source: IMAGE Consortium, LINL
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                    Contact: Wilson RK
WashUrMerck EST Project
WashIngton University School of Medicine
4444 Forest Park Parkway, Box 8501, St. I
Tel: 314 286 1810
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                  Wilson, R.
The Washu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        yj31h01.r1 Ho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            262;
                                                                                                                                                                                                                                                                                                                             Hillier,L., Clark,N., Dubuque,T., Elliston,K., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennor Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Trevaskis,E., Waterston,R., Williamson,A., Woh
                                                                                                                                                                                                                                                                                                                                                                                          Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichthyes; Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 423)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library went through one round of normalization. Library constructed by Bento Soares and M.Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        н00861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                  Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata;
                                                                                                                                                                                                                                                                                WashU-Merck EST
ublished (1995)
              109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
             /organism="Homo sapiens"
/clone="150385"
95 c 95 g 11
                                                                          Location/Qualifiers
                                                              .423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OMO Sapiens cDNA clone
HORMONES ALPHA CHAIN I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 đđ
                                                                                                                                                                                                                                                                                                  Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
             119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     e 150385 5'
                                                                                                                                                                                                                                                                                                                                                                             Elliston, K.,
             d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                    Louis,
                                                                                                                                                                                                                                                                                                                                               Lennon,G., Marra,M., es,M., Tan,F.,
                                                                                                                                                                                                                                                                                                                                  Wohldmann, P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HUMAN);.
                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                                                                                                                                                                                              Hawkins, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δõ
밁
                           Š
                                                            밁
                                                                                        Š
                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1054
                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               874
159
                                                          99
                                                                                                                        39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TIGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACT 933
                                                                                                          TTGCCCAGAATGCACGCTACAGGAAAACCCCATTCTTCTCCCAGCCGGGTGCCCCAATACT 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTGCCCAGAATGCACGCTACAGGANAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACT
GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTAGCTAAATCATATAA 218
                                          TCAGTGCATGGGCTGCTGCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTGTTATTATCACAAATCTTAA 1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTGTTATTATCACAAATCTTAA 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA
                           TCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC
                                                                                         TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACT 933
                                                                                                                                                                                                                                                                                                                                                                                                                                           Fujiwara,T., Hirano,H., Hishigaki,H., Horie,M., Kawai,A., Kuga Kyushiki,H., Nagata,M., Okuno,S., Ozaki,K., Shimizu,F., Shimac Shinomiya,H., Suzuki,M., Takaichi,A., Takeda,S., Watanabe,T., Maekawa,H., Nakamura,Y. and Takahashi,E. Otsuka cDNA project Unpublished (1996)

2 (bases 1 to 464)
                                                                                                                                                       262;
                                                                                                                                                                                                                                                                                                                                            Submitted (13-MAY-1996) to the DDBJ/EMBL/GenBank databases. Tsutomu Fujiwara, Otsuka GEN Research Institute,Otsuka Pharmaceutical Co.,Ltd: 463-10 Kagdsuno Kawauchi-cho, Tokushima, Tokushima 771-01, Japan (Tel:+81-886-65-2888, Fax:+81-886-37-1035)
                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                    h 22.8%;
Similarity 100.0%;
262; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 464)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (sites)
                                                                                                                                                                                                                                  114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \mathtt{EST}(\texttt{expressed} sequence tag); Human placenta sapiens placenta cDNA to mRNA, clone:541F08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22.8%;
llarity 99.6%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              placenta
                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="541F08"
                                                                                                                                                                                                                                                                                                            1. .464
                                                                                                                                                                                                                                 /tissue_type='
                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mitochondrial eukaryotes; Metazoa; Chordata; Mammalia; Eutheria; Primates; Catarrhini; HC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA 5'-end GEN-541F08
                                                                                                                                                  Score 262; DB 23;
Pred. No. 0.00e+00;
0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 261; DB 12;
Pred. No. 0.00e+00
                                                                                                                                                                                                                               "placenta"
95 g 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 12;
                                                                                                                                                                                                                                 rt
                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 423;
                                                                                                                                                                                 Length 464;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04-SEP-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hominidae;
                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ., Kuga,Y.,
Shimada,Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             77
                              993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
◆
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                    밁
                                                               Ş
                                                                                                  뮻
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                  Query Match 22.8%;
Best Local Similarity 100.0%;
Matches 262; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1054
                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           994
     934
                                    110
                                                                      874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        219
                                                                                                   50
TCAGTGCATGGGCTGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGGGTCACAGTAATGGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTAC 1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCCAATACT 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTGTTATTATCACAAATCTTAA 1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTGTTATTATCACAAATCTTAA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTAC 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         σ
                                                                 TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACT 933
                                                                                                                                                                                                                                                                                                                                                                     4444 Forest Park Parkway, Box 8501, St. L
Tel: 314 286 1800
Fax: 314 286 1810
Email: e-+4...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9844946
EST.
                                                                                                                                                                                                                                                              High quality sequence stops: 386
Source: IMAGE Consortium, LLNL
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Location/Qualifiers
1. 467
                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Wilson RK
WashU-Merck EST Project
Washington University Sc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hillier,L., Clark,N., Dubuque,T., Elliston,K., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennor Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Trevaskis,E., Waterston,R., Williamson,A., Woh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Deuterostomia; Chordata; Vertebrata; Gnathostomata; Ost
Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia;
Eutheria; Archonta; Primates; Catarrhini; Hominidae; Ho
1 (bases 1 to 467)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library went through one round of normalization. Library constructed by Bento Soares and M.Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The WashU-Merck EST Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                  Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        y151d03.r1
                                                                                                                                                                                                                     113
                                                                                                                                                                                                                     ß
                                                                                                                                                                                                                   /organism="Homo sapiens"
/clone="142757"
1 114 c 98 g 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens cDNA clone 142757 5' similar to IN HORMONES ALPHA CHAIN PRECURSOR (HUMAN);.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Project
                                                                                                                                                  Score 262; DB 11;
Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA
                                                                                                                                                                                                                 Q
                                                                                                                                  Mismatches
                                                                                                                                                                                                                   139
                                                                                                                                                                                                                     ۲,
                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                  Louis, MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lennon,G., M
es,M., Tan,F.
                                                                                                                                                                 Length
                                                                                                                                                                                                                   w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wohldmann, P. and
                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hawkins, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Osteichthyes;
                                                                                                                                0
                                                                                                                                                                                                                                                                                                                   contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Marra, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Theria;
                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gb: V00518
                                                                                                                                  0
```

```
RESULT
LOCUS
                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                용
                                                                                     밁
                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                      Query Match 22.7%;
Best Local Similarity 98.9%;
Matches 263; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1114
                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              290
                                                  870 CAGGTTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAA
62 TACTTCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGA 121
                                                                                       N
                                                                                     CAGGATTGCCAGAATGCACGCTACAGGAAAACCCCATTCTTCTCCCAGCCGGGTGCCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTGTTATTATCACAAATCTTAA 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGGGTGCCACTGCAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTGTTATTATCACAAATCTTAA 1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens Escaryotae; Metazoa; Chordata; Vertebrata; Gnathostomata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 433)
11 (bases 1 to 433)
13 (bases 1 to 433)
14 (bases 1 to 433)
15 (bases 1 to 433)
16 (bases 1 to 433)
17 (clark, N., Dubuque, T., Elliston, K., Hawkins, M., Hillier, L., Clark, N., Sucaba, T., Le, M., Lennon, G., Marra, M., Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F., Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F., Parsons, J., Waterston, R., Williamson, A., Wohldmann, P. and
                                                                                                                                                                                                                                                                         Tel: 314 286 1800
Fax: 314 286 1810
Email: estewatson.vustl.edu
High quality sequence stops: 334
Source: IMAGE Consortium, LLNL
This clone is available royalty-free through LLNL;
IMAGE Consortium (info@image.linl.gov) for further i
                                                                                                                                                                                                                                                                                                                                                                                                                 WashIngton University School of Medicine WashIngton University School of Medicine 4444 Forest Park Parkway, Box 8501, St.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The WashU-Merck EST Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    yh48c04.rl Homo sapiens cDNA clone 132966 5 GLYCOPROTEIN HORMONES ALPHA CHAIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Wilson
                                                                                                                                                                                                             11
                                                                                                                                                                                                             ø
                                                                                                                                                                                                           /organism="Homo sapiens"
/clone="132966"
104 c 90 g 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Project
                                                                                                                    Score 260; DB 11;
pred. No. 0.00e+00;
0; Mismatches 3
                                                                                                                                                                                                         90 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                             127
                                                                                                                                                                                                             ct
                                                                                                                        ω,
                                                                                                                                                                                                                                                                                                                                                                                                                         Louis,
                                                                                                                                                      Length 433;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ń
                                                                                                                        Indels
                                                                                                                                                                                                                                                                                               further information
                                                                                                                                                                                                             others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ' similar to gb: V00518 (HUMAN);
                                                                                                                                                                                                                                                                                                                                                                                                                       MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-APR-1995
                                                                                                                      0
                                                                                                                                                                                                                                                                                                                 contact the
                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       229
                                                  929
                                                                                     61
```

ş

930

TACTTCAGTGCATGGGCTGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGA

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
   밁
                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                             ORIGIN
                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                           Query Match 22.7%;
Best Local Similarity 100.0%;
Matches 260; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1110
                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1050
                                 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       122
   104
                                                               44
                                              TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCCAGCCGGGTGCCCCAATACT 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTACTTGTTATTATCACAAATCTTAA 1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC 163
                              TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACT 933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTACTTGTTATTATCACAAATCTTAA 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATAACAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGCGGTGCCACTGCA 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteicht Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia; Theri Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 452)
Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M., Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M. Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F., Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and
                                                                                                                                                                                                                                                                                                                                Contact: Wilson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. I
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High qality sequence stops: 322
Source: IMAGE Consortium, LLNL
This clone is available royalty-free through LLNL;
IMAGE Consortium (info@image.llnl.gov) for further i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDNA was ligated to Eco RI adaptors (Pharmacia), digested with No I and cloned into the Not I and Eco RI sites of the modified pT77 vector. Library went through one round of normalization. Library constructed by Bento Soares and M.Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             H00781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                   Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                               WashU-Merck EST ublished (1995)
                                                                                                                                                                          107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .r1
                                                                                                                                                                        /organism="Homo sapiens"
/clone="150241"
104 c 103 g 13
                                                                                                                                                                                                                                      Cocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HOMO Sapiens cDNA clone
IN HORMONES ALPHA CHAIN F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Project
                                                                                          Score 260; DB 12;
Pred. No. 0.00e+00;
0; Mismatches 0
                                                                                                                                                                     103 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                        133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       150241
                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                  Louis,
                                                                                                                          Length 452;
                                                                                                                                                                        υ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ú
                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ' similar to (HUMAN);.
                                                                                                                                                                        others
                                                                                                                                                                                                                                                                                                                                                                    MO 63108
                                                                                                                                                                                                                                                     information
                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Marra, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Osteichthyes;
                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gb:V00518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1049
                                                                                           0
```

```
TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
LOCUS
                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                 밁
                                            Ş
                                                                          밁
                                                                                                    Ş
                                                                                                                                  밁
                                                                                                                                                                                               В
                                                                                                                                                                                                                          ğ
                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                   BASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1114
                                               1058
                                                                                                                                                                                                                                                                                                                                                                   COUNT
                 241
                                                                                                         866
                                                                                                                                    121
                                                                                                                                                                  938
                                                                                                                                                                                                                             878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       164
                                                                                                                                                                                                                                                                                                      Y Match 22.5%;
Local Similarity 100.0%;
                                                                                                                                                                                               61
                                                                                                                                                                                                                                                          1 CCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA 1053
                                                                                                                                                                                  TGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGACGATG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTGTTATTATCACAAATCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTATCACAAATCTTAA
                                              GTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTACTTGT
                                                                 GTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTACTTGT 240
                                                                                                                       TTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAACAGG 180
                                                                                                                                                                                                                           CCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACTTCAG 937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTGTTATTATCACAAATCTT 1133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA 223
                                                                                                       TTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAACAGG
                                                                                                                                                                  TGCATGGGCTGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGACGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
Submitted (13-MAY-1996) to the DDBJ/EMBL/GenBank databases. Fujiwara, Otsuka GEN Research Institute,Otsuka Pharmaccutica. Co.,Ltd; 463-10 Kayasuno Kawauchi-cho, Tokushima, Tokushima Japan (Tel:+81-886-65-2888, Fax:+81-886-37-1035)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fujiwara,T., Hirano,H., Hishigaki,H., Horie,M., Kawai,A., Kuga,Y., Kyushiki,H., Nagata,M., Okuno,S., Ozaki,K., Shimizu,F., Shimada,Y., Shinomiya,H., Suzuki,M., Takatchi,A., Takeda,S., Watanabe,T., Maekawa,H., Nakamura,Y. and Takahashi,E.
                                                                                                                                                                                                                                                                                          258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fujiwara, T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryotae;
Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOTILO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 478)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (sites)
                                                                                                                                                                                                                                                                                                                                                                   125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST(expressed sequence tag); Human placenta sapiens placenta cDNA to mRNA, clone:539G04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    placenta
                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="539604"
/tissue_type="placenta"
a 113 c 96 g 144
                                                                                                                                                                                                                                                                                                                                                                   þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mitochondrial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cDNA 5'-end GEN-539G04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ģ
                                                                                                                                                                                                                                                                                     Score 258; DB 23;
Pred. No. 0.00e+00;
0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          eukaryotes; Metazoa; Chordata;
heria; Primates; Catarrhini; Ho
                                                                                                                                                                                                                                                                                                                                                                   144
                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                     Length 478;
                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-SEP-1996
                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hominidae;
                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                  997
                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tsutomu
                                                                                                                                                                                                                                                                                          0
```

Ş

1118

TATTATCACAAATCTTAA

```
TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
LOCUS
                                                                                                                                                                                  å
                                                                                                                                                                                                                                                                                                                                                                                           용
                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                     SOURCE
                                    KEYWORDS
                                                   NID
                                                                                             DEFINITION
                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zib
                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                    1114
                                                                                                                                                                                                                                            1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                               306
                                                                                                                                                                                                                                                                                                                                                                                                                        874
                                                                                                                                                                                                                                                                         247
                                                                                                                                                                                                                                                                                                      994
                                                                                                                                                                                                                                                                                                                                   187
                                                                                                                                                                                                                                                                                                                                                                934
                                                                                                                                                                                                                                                                                                                                                                                             127
                                                                                                                                                                                                                                                                                                                                                                                                                                                     67
                                                                                                                                       11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                        TCAGTGCATGGGCTGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC 186
                                                                                                                                                                                                                                                                                                                                                                                                                 CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGA-CCACACGGGGTGCCACTGCAGTAC
                                                                                                                                                                                                                                                                                                                    TTGTTATTATCACAAATCTTAA 327
                                                                                                                                                                                                                                         CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTAC 1113
                                                                                                                                                                                                                                                                                                 GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA 1053
                                                                                                                                                                                 TTGTTATTATCACAAATCTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission

Submitted (24-JUN-1996) to the DDBJ/EMBL/GenBank databases. Tsutomu Submitted (24-JUN-1996) to the DDBJ/EMBL/GenBank databases. Tsutomu Fujiwara, Otsuka GEN Research Institute,Otsuka Pharmaceutical Co.,Ltd; 463-10 Kagasuno Kawauchi-cho, Tokushima, Tokushima 771-01, Japan (Tel:+81-886-55-2888, Fax:+81-886-37-1035)

Japan (Tel:+81-886-65-2888, Fax:+81-886-37-1035)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 261;
    human clone=145077 (Pharmacia) with a
                                                                             y175dll.rl Ho
GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fujiwara,T., Hirano,H., Hishigaki,H., Horie,M., Kawai,A., Kuga,Y., Kyushiki,H., Nagata,M., Okuno,S., Ozaki,K., Shimizu,F., Shimada,Y., Shinomiya,H., Suzuki,M., Takaichi,A., Takeda,S., Watanabe,T., Maekawa,H., Nakamura,Y. and Takahashi,E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g1580005
                                                                R77385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Otsuka cDNA project
Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C18403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fujiwara,T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Mammalla; Eutheria; Primates; Catarrhini; Ho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST(expressed sequence tag); Human placenta. sapiens placenta cDNA to mRNA, clone:561H02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22.2%;
llarity 99.6%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     placenta cDNA 5'-end GEN-561H02.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="561H02"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /tissue_type="placenta"
87 c 73 g
                                                                            HOMO Sapiens cDNA clone 145077 5'
                                                                                                                          458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  330
                                                                                                                       ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                đđ
library=Soares placenta Nb2HP vector-pT7T3D modified polylinker host-DH10B (ampicillin
                                                                                                                                                                                  1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 255; DB 23;
Pred. No. 0.00e+00;
0; Mismatches 0
                                                                                                                        mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TIRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                          (HUMAN);
                                                                                                                       06-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               09-SEP-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۳.
                                                                                      ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                        gb: V00518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Shimada, Y.,
                                                                                                                                                                                                                                                                    305
```

```
ACCESSION
NID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                           RESULT
LOCUS
                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                             1122
                                                                                                                                                                                                                                                                                                                                                                                                               1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         882 AATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACTTCAGTGCA
                                                                                                                                                                                                                                                                                                                                                      256 ATCACAAATCTTAA 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16 AATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCCAATACTTCAGTGCA 75
                                                                                                                                                                                                         12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGGCTGCTGCTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGACGATGTTGG 135
                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTACTTGTTATT
                                                                                                                                                                                                                                                                                             ATCACAAATCTTAA 1135
                                                                                                                                                                                                                                                                                                                                                                                                            CAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTACTTGTTATT
H03289
9866222
EST.
                                                                                       yj44hl0.rl Hc
GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tel: 314 286 1800
Fax: 314 286 1810
Email: estewatson.wustl.edu
High quality sequence stops:
Source: IMAGE Consortium, Lik
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichi Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia; Theri Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 458)
Hiller, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M., Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M. Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F., Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and wilson by Marrashing, M., Waterston, R., Williamson, A., Wohldmann, P. and wilson by Marrashing, M., Waterston, R., Williamson, A., Wohldmann, P. and wilson by Marrashing, M., Waterston, R., Williamson, A., Wohldmann, P. and Wilson by M., Waterston, R., Williamson, A., Wohldmann, P. and Wilson by Marrashing, M., Waterston, R., Williamson, A., Wohldmann, P., and Wilson by M., Waterston, R., Williamson, A., Wohldmann, P., and Wilson by M., Waterston, R., Williamson, A., Wohldmann, P., and Wilson by M., Waterston, R., Williamson, A., Wohldmann, P., and Wilson by M., Waterston, R., Williamson, A., Wohldmann, P., and Wilson by M., Waterston, R., Williamson, A., Wohldmann, P., and Wilson by M., Waterston, R., Williamson, A., Wohldmann, P., and Wilson by M., Waterston, R., Williamson, A., Wohldmann, P., and Wilson by M., Waterston, R., Williamson, A., Wohldmann, P., and Wilson by M., Waterston, R., Williamson, A., Wohldmann, P., and Wilson by M., Waterston, R., Williamson, A., Wohldmann, P., and Wilson by M., Waterston, R., Williamson, A., Wohldmann, P., and Wilson by M., Waterston, R., Williamson, A., Wohldmann, P., and Waterston, R., Williamson, A., Wohldmann, P., and Wilson by M., Waterston, R., Williamson, A., Wohldmann, P., and Wilson by M., Waterston, R., Williamson, A., Wohldmann, P., and W., Waterston, R., Williamson, A., Waterston, R., Williamson, A., Waterston, R., Williamson, A., Waterston, R., Waterston, 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library went through one round of normalization. Library constructed by Bento Soares and M.Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The WashU-Merck EST Project 
Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H03289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              h 22.1%;
Similarity 100.0%;
254; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This clone is available royalty-free through LLNL; IMAGE Consortium (info@image.llnl.gov) for further
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/clone="145077"
109 c 97 g 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                 Homo sapiens cDNA clone 151651 5' similar to gb:v00518 IN HORMONES ALPHA CHAIN PRECURSOR (HUMAN);.
                                                                                                                                                                           482
                                                                                                                                                                           ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 254; DB 11;
Pred. No. 0.00e+00;
0; Mismatches 0;
                                                                                                                                                                           MRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 458;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tan, F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63108
                                                                                                                                                                           20-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Osteichthyes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Theria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

Tsutomu 771-01

```
REFERENCE
AUTHORS
                       ACCESSION
                                                                       RESULT
LOCUS
                                                                                                                                                                         밁
                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                              å
                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
       NID
                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                           1112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                291
                                                                                                                                                                                                                                                                               994
                                                                                                                                                                                                                                                                                                                 171
                                                                                                                                                                                                                                                                                                                                                   934
                                                                                                                                                                                                                                                                                                                                                                                     111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                           13
                                                                                                                                                                                                                           CAGGGTCACAGTAATGGGGGGGTTTCAAAGTGGGAGAACCACACGGGCGTGCCACTGCAGT
                                                                                                                                                                                                                                                                                                                                                               TCAGTGCATGGGCTGCTGCTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC 170
                                                                                                                                                                                                                                                                                           GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA 230
                                                                                                                                                                                                                                                                                                                                              TCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCCACTCCACTAAGGTCCAAGAAGAC
                                                                                                                                                                       ACTIGITATIATCACAAATCITAA 314
                                                                                                                                                                                                                                                                           GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA 1053
                                                                                                                                                                                                           CAGGGTCACAGTAATGGGGGGTTTCAAAGTGG-AGAACCACACGG-CGTGCCACTGCAGT
                                                                                                                                         ACTTGTTATTATCACAAATCTTAA 1135
   Human placenta (
D79076
g1180949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: est@watson.wustl.edu
High qality sequence stops: 301
Source: IMAGE Consortium, LLNL
This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eutheria; Archonta; Primates; Čatarrhini; Hominidae; Homo.

1 (bases 1 to 482)

Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M.,

Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M.

Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F.,

Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified p7/73 vector. Library went through one round of normalization. Library constructed by Bento Soares and M.Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis,
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wilson, R.
The WashU-Merck EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Os: Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Wilson RK
WashU-Merck EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                         HUM530G10B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/clone="151651"
106 c 118 g 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
1. .482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21.8%;
99.2%;
                                                                       336
                                       CDNA
                                                                       ď
                                     5'-end GEN-530G10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         118 g
                                                                       mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         250; DB 12;
No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 482;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tan, F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Osteichthyes;
ia; Theria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                           1111
                                                                                                                                                                                                                                           290
                                                                                                                                                                                                                                                                                                                                                 993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                      Ş
                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                        δδ
                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                   ACCESSION
                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                       1114
                                                                                                                                                                                                                                         1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                     874
                                                                                                                                                                                                        287
                                                                                                                                                                                                                                                                           227
                                                                                                                                                                                                                                                                                                            994 GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCTAAATCATATAA
                                                                                                                                                                                                                                                                                                                                               167
                                                                                                                                                                                                                                                                                                                                                                               934
                                                                                                                                                                                                                                                                                                                                                                                                                 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                       TTGTTATTATCACAA
                                                                                                                                                                                                                                         CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTAC
                                                                                                                                                                                                                                                           CAGGGTCACAGTAATGGGGGGTTTCATAGTGGGGACCCACACGGCGTGCCACTGCAGTAC
                                                                                                                                                                                                                                                                                                                             GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTGTAGCCTAAATCATATAA 226
                                                                                                                                                                                                                                                                                                                                                                               TCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                 TCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC 166
                                                                                                                                                                                                                                                                                                                                                                                                                                                   TIGCCCAGAAIGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAAIACT 933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACT 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         252;
zj46h11.s1 Soares fetal liver spleen clone 453381 3' similar to gb:V00518 CHAIN PRECURSOR (HUMAN);.
AA779136
g2838467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tsutomu Fujiwara
Otsuka GEN Research Institute
Otsuka Pharmaceutical CO.,Ltd
463-10 Kagasuno Kawauchi-cho
Tokushima, Tokushima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Direct Submission
Submitted (07-NOV-1995) to the DDBJ/EMBL/GenBank databases. 1
Fujiwara, Otsuka GEN Research Institute,Otsuka Pharmaceutical
Co.,Ltd, 463-10 Kagasuno Kawauchi-cho, Tokushima, Tokushima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fujiwara,T., Hirano,H., Katagiri,T., Kawai,A., Kuga,Y., Nagarokuno,S., Ozaki,K., Shimizu,F., Shimada,Y., Shinomiya,H., Takaichi,A., Takeda,S., Watanabe,T., Takahashi,E., Hirai,Y., Maekawa,H., Shin,S. and Nakamura,Y.

Large-scale sequencing project at Otsuka GEN Research Institution Unpublished (1995)
2 (bases 1 to 336)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST; EST(expressed sequence tag); Human placenta. Homo sapiens placenta cDNA to mRNA, clone_lib:human placenta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (7-Nov-1995) to DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fujiwara, T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                     AA779136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tokushima,
771-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryotae; mitochondr
Vertebrata; Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       polyA+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Phone:0886-65-2888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 336)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 :0886-37-1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone_lib="human placenta polyA+"
/tissue_type="placenta"
/tissue_type="placenta"
89 c 78 g 93 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mitochondrial eukaryotes; Metazoa; Chordata; Mammalia; Eutheria; Primates; Catarrhini; Ho
                                                                                                     519
                                                                                                     ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                     mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     by:
                                                   1NFLS S1 HOMO
GLYCOPROTEIN F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 336;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                   HORMONES ALPHA
                                                                                                     05-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

1113

286

1053

993

```
KEYWORDS
SOURCE
                                                                                                                          င္ပ
                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                            ဌ
                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                          င္ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
   င္မ
                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            င္မ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                   1015
                                                                                                                                                                                                                                                                                                                                                                                                 1075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  313
                                                                    493
                                                                                                                                 955
                                                                                                                                                                                                  433
                                                                                                                                                                                                                                                                                                                                373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                253
   895
                                  CTG-AGCGTG-ATTCTGGGGAATCTG 516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTAAGATTTGTGATAATAACAAGTACTGCAGTGGCACGCCGTGTGGGTTCTCCACTTTGAA 312
                                                                                                                                                         GAAGCAGCAGCCCATGCACTGAAGTAGTGGGGCACCGGGCTCGTAGAAGAATGGGGTTTC 492
                                                                                                                                                                                                                                                                                           GACGTTCTTTTGGACCAACATCGTCTTCTTGGACCTTAGTGGAGTGGGATATGCTCTAGA 432
                                                                                                                                                                                                                                                                                                                                                                                       TTAAGATTTGTGATAATAACAAGTACTGCAGTGGCACGCCGTGTGGTTCTCCACTTTGAA 1076
CTGTAGCGTGCATTCTGGGCAACCTG
                                                                                                                          GAAGCAGCCCATGCACTGAAGTATTGGGGCACCCGGCTGGGAGAAGAATGGGTTTTC
                                                                                                                                                                                                                                                        GACGTTCTTTTGGACCAACATCGTCTTCTTGGACCTTAGTGGAGTGGGATATGCTCTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCCCCCATTACTGTGACCCTGTTATATGATTTAGCTACACAGCAAGTGGACTCTGAGGT 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hillier, Allen, M., Bowles, L., Dubuque, T., Geisel, G., Jost Krizman, D., Kucaba, T., Lacy, M., Le, N., Lennon, G., Marra, M., Martin, J., Moore, B., Schellenberg, K., Steptoe, M., Tan, F., Theising, B., White, Y., Wyle, T., Waterston, R. and Wilson, R. Washu-NCI human EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Wilson RK
Washington University Scho
4444 Forest Park Parkway,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Seq primer: -40ml3 fwd. ET from Amersham High quality sequence stop: 316.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Primates; Catarrhini; Hominidae;
1 (bases 1 to 519)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryotae; Metazoa; Chordata; Vertebrata; Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          h 20.7%;
Similarity 96.6%;
257; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /Organism="Homo sapiens"
//Organism="Homo sapiens"
//Organism=
//Organism="Homo sapiens"
//Organism=
//Org
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /dev_stage="20 week-post conception fetus"
/lab_host="DH10B (ampicillin resistant)"
98 c 127 g 138 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:9606"
/clone="453381"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /sex-"male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone_lib="Soares fetal liver spleen lNFLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 238; DB 31;
Pred. No. 0.00e+00;
0; Mismatches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                School of Medicine way, Box 8501, St. 1
   870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   St. Louis, MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ņ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                            956
                                                                                                                          896
```

```
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                             Š
                                                                                                밁
                                                                                                                           Ş
                                                                                                                                                               В
                                                                                                                                                                                            Š
                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                            ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
Ş
                                 밁
                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             din
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rocus
                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                408
                                                                                                  349
                                                                CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGAACCACACGGCGTGCCACTGCAGTAC
                                                                                                                                                                                                                                                                               TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACT 228
TTGTTATT-ATCACAA
                  TTTTTTTTTATCACAA
                                                                                              CAGGGTCACAGTAATGGGGGGTTTCAAAGTGGAGA-CCACACGGCGTGCCACTGCAGTAC 407
                                                                                                                             GATGTTGGTCCAAAAGAACGTCACCTCAGAGTCCACTTGCTGTAGCTAAATCATATAA
                                                                                                                                                TCAGTGCATGGGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC
                                                                                                                                                                                                              TCAGTGCATGGGCTGCTGCTTCTCTAGAGCATATCCCACTCCACTAAGGTCCAAGAAGAC 288
                                                                                                                                                                                                                                                            TTGCCCAGAATGCACGCTACAGGAAAACCCATTCTTCTCCCAGCCGGGTGCCCCAATACT 933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fujiwara,T., Hirano,H., Hishigaki,H., Horie,M., Kawai,A., Kugi Kyushiki,H., Nagata,M., Okuno,S., Ozaki,K., Shimazu,F., Shimax Shinomiya,H., Suzuki,M., Takaichi,A., Takada,S., Watanabe,T., Maekawa,H., Nakamura,Y. and Takahashi,E.
Otsuka cDNA project
Onpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (24-JUN-1996) to the DDBJ/EMBL/GenBank databases. Tsutomu Fujiwara, Otsuka GEN Research Institute,Otsuka Pharmaceutical Co.,Ltd; 463-10 Kagasuno Kawauchi-cho, Tokushima, Tokushima 771-01, Japan (Tel:+81-886-55-2888, Fax:+81-886-37-1035)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fujiwara, T.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished
2 (bases 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Нопо
                                                                                                                                                                                                                                                                                                                             h 20.6%;
Similarity 98.0%;
251; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryotae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C17966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 423)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST(expressed sequence tag);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          placenta
                                                                                                                                                                                                                                                                                                                                                                                                              œ
                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="555E01"
                                                                                                                                                                                                                                                                                                                                                                                                         /tissue_type="placenta"
117 c 90 g 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mitochondrial eukaryotes; Metazoa; Chordata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         placenta cDNA to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          423
                                423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA 5'-end GEN-555E01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ģ
                                                                                                                                                                                                                                                                                                                           Score 236; DB 23;
Pred. No. 0.00e+00;
0; Mismatches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA, clone:555E01
                                                                                                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                             ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST
                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-SEP-1996
                                                                                                                                                                                                                                                                                                                             <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shimada, Y.,
                                                                1113
                                                                                                                               1053
                                                                                                                                                                                               993
```

completed: Wed ne : 1066 secs. May σ 14:18:45 1998

RESULT

\*

* * *	**	
* * * *		
* * * *	<u> </u>	
如果他的 经存储 计设计设计 医克拉特氏 医克拉特氏 医克拉特氏 医克拉特氏 医克拉特氏 医克拉特氏 医克拉特氏 医克拉氏 医克拉特氏 医克拉特氏 医克拉特氏 医克拉特氏 医克拉特氏 医克拉特氏病 计记录器 计记录器 计记录器 计记录器 计记录器 计记录器 计记录器 计记录器		
* * * *		
* * *		
* * *		
* * * *		
*	'	
* * *		
* *	乙川	
* * *	ン ''	
* * *	[	
* * *		
* * *		
* * *		
* * * *		
* * *	(ME)	
*	*	

Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

\*

MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Wed May 6 09:01:34 1998; MasPar time 9.14 Seconds 466.133 Million cell updates/sec

Tabular output not generated.

Description: Perfect Score:

Sequence: YUS-08-804-166-5 (1-285) from US08804166.pep 2183 1 SRTSLLLAFGLLCLPWLQEG......GFKVENHTACHCSTCYYHKS 285

Scoring table: PAM 150 Gap 11

Searched: 120837 segs, 14945562 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database: a-geneseq31

i:parti 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26

Mean 31.870; Variance 121.907; scale 0.261

Statistics:

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

NO.	2183 1667 1505 1306 1305	Match 100.0 76.4 68.9 59.8 59.8	Length 285 256 336 371 451	13 26 26 26 13	W33359 W33357 W33357 W33360 R07449 R70107	TBP(20-190)/hCG-alpha TBP(20-161)/hCG-alpha TBP(20-161)/hCG-beta TMMOUNT Necrosis Facto TNF-R-GBP 130 fusion
ω N	1567	76.4	25 6	200	W33357	20-161)/hcg
e w	1306	59. 8	336 371	26	W33360 R07449	(20-190)/hCG
ر.	1305	59.8	451	13	R70107	130 f
σ	1306	59.8	455	4	R24000	TNF-alpha 55kD recept
7	1306	59.8	455	14	R75084	
œ	1306	59.8	455	4	R20787	TNF-alpha binding pro
9	1306	59.8	455	œ	R42059	
10	1306	59.8	455	N	R10986	30kD TNF inhibitor p
11	1306	59.8	455	N	R11082	Human 55kD TNF-bindin
12	1305	59.8	900	13	R70103	TNF-R-GBP 130 fusion
13	1303	59.7	309	13	R70108	TNF-R-GBPH fusion pro
14	1303	59.7	455	ν	R07451	Human Tumour Necrosis
15	1303	59.7	547	13	R70104	TNF-R-GBPH fusion pro
16	1303	59.7	1604	13	R70105	TNF-R-EBA 175 fusion
17	1301	59.6	1245	13	R70106	
18	1297	59.4	433	œ	R51032	ŭ
19	1297	59.4	443	œ	R51033	p55

밁 δÃ 밁

Н

61 tdcrecesgsftasenhlrhclscskcrkemgqveissctvdrdtvcgcrknqyrhywse 120

Query Match Best Local S Matches 28

/ Match 100.0%; Local Similarity 100.0%; les 285; Conservative

Score 2183; DB 26; Pred. No. 2.81e-227; 0; Mismatches 0;

Length 285; Indels 0;

Gaps

0,

1297 59.4 455 8 R\$1034 Mutant p55 tumour necrosis = 1297 59.2 455 8 R\$1034 Mutant p55 tumour necrosis = 1288 59.2 455 8 R\$1035 Tppe I TNF receptor. 1289 59.0 307 26 W33358 Tppe 15 TNF receptor. 1286 59.2 455 8 R\$1036 Native 30 kD TNF inhi 1247 57.1 161 5 R\$7496 Native 30 kD TNF inhi 1247 57.1 884 13 R70109 TNF-R-GBP 130 fusion 1236 56.6 199 4 R\$24080 TNF-R-GBP 130 fusion 1236 56.5 168 4 R\$24080 TNF-R-GBP 130 fusion 1236 56.5 168 4 R\$24080 TNF-R-GBP 130 fusion 1236 57.1 1884 12 R\$158 4 Truncated TNF-Alpha 5 912 41.8 158 4 R\$24081 Truncated TNF-Alpha 5 912 41.5 R\$6254 Single chain gonadotr 705 32.3 234 15 R\$6276 Single chain gonadotr 69 31.9 234 15 R\$6274 Single chain gonadotr 69 31.9 234 15 R\$6255 Single chain gonadotr 69 31.7 222 15 R\$6256 Single chain gonadotr 69 31.7 222 15 R\$6256 Single chain gonadotr 69 31.6 234 15 R\$6250 Single chain gonadotr 705 229 15
.4 455 8 R51037  .4 455 3 R51037  .2 455 3 R51037  .0 307 26 W33358 TEP(20-16  .1 161 5 R27196 Native 30  .1 161 5 R27196 Native 30  .1 184 13 R70109 TNF-R-GBP  .5 168 4 R24080 Truncated  .5 168 4 R24081 Truncated  .5 168 4 R24081 Truncated  .5 168 234 15 R86254 Single ch  .3 234 15 R86256 Partially  .3 234 15 R86249 Single ch  .9 234 15 R86249 Single ch  .9 234 15 R86253 Single ch  .9 234 15 R86256 Single ch  .9 234 15 R86256 Single ch  .9 234 15 R86256 Single ch  .9 234 15 R86250 Single ch  .7 222 15 R86250 Single ch  .8 234 15 R86250 Single ch  .7 223 15 R86250 Single ch  .8 234 15 R86250 Single ch  .8 234 15 R86251 Single ch
8 R51034 Mutant post induced by the state of
8 R41219/ 8 R12550 Tipe I TN 5 R27496 Native 30 8 R70109 TNF-R-GBP 4 R24080 Truncated 4 R24081 Truncated 4 R24081 Truncated 4 R24081 Truncated 5 R86256 Single ch 5 R86276 Single ch 5 R86258 Single ch 5 R86258 Single ch 5 R86259 Single ch 5 R86250 Single ch 5 R86270 Single ch 5 R86250 Single ch
Mutant p50 Mutant p50 Mutant p50 Mative 30 Mat
I TN Very Control of the Control of

## ALIGNMENTS

```
RESULT
PR 20-FEB-1996; US-011936.

PR (ISTF) ARS APPLIED RES SYSTEMS HOLDING NV.

PR (ISTF) APPLIED ARE AP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W33359 standard; Protein; W33359; l9-MAR-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
W09730161-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TBP(20-190)/hCG-alpha fusion protein.
Fusion protein: thrombopoletin; TPO; human chorionic gonadotrophin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           alpha subunit; hCG-alpha.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    285 AA.
```

```
SON COLUMN TO THE PROPERTY OF 
ξ
                                                      밁
                                                                                                    Š
                                                                                                                                                             밁
                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ρy
                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hybrid dimeric protein comprising two co-expressed units - each based on receptor or ligand and a subunit of a heterodimeric hormone, especially FSH, for inducing follicular maturation Example; Pages 32-33; 60pp; English.

A novel fusion protein comprises 2 dimer forming co-expressed amino acid sequences, each consisting of a homodimeric or heterodimeric receptor chain or ligand, with ligand-receptor binding activity, bound directly or via a peptide linker to a subunit of a heterodimeric protein hormone capable of forming a heterodimer with the hormone's other subunits. The fusion protein, e.g. the thrombopoietin (TPO)/human chorionic gonadotrophin-alpha subunit (hCG-alpha) fusion protein denoted by the present sequence, significantly increases the biological activity of the hormone component, reducing the requirement for hormone itself and the number of injections needed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-FEB-1997; U02315.
20-FEB-1996; US-011936.
(ISTF ) ARS APPLIED RES SY
Campbell RK, Chappel SC, J
WPI; 97-425036/39.
N-SDB; T944007.
N-SDB; T944007
Hybrid dimeric protein com
based on receptor or ligan
hormone, especially FSH, f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
W09730161-A1.
21-AUG-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   W33357 standa
W33357;
W33357;
19-MAR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      alpha subunit; hCG-alpha.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TBP(20-161)/hCG-alpha fusion pro
Fusion protein; thrombopoietin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
     241
                                                      212
                                                                                                            181
                                                                                                                                                                165
                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ۳
                                                                                                                                                                                                         srtslllafgllclpwlqegsadsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nlfqcfnctlclngtvhlscqekqntvctchagfflrenecvscsnckkslectklslpq
                                                                                                    tdcrecesgsftasenhlrhclscskcrkemgqveissctvdrdtvcgcrknqyrhywse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    lvqknvtsestccvaksynrvtvmggfkvenhtachcstcyyhks 285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ienvkgtedsgttagaapgcpectlqenpffsqpgapilqcmgccfsrayptplrskktm
  LVQKNVTSESTCCVAKSYNRVTVMGGFKVENHTACHCSTCYYHKS
                             lvqknvtsestccvaksynrvtvmggfkvenhtgchcstcyyhks
                                                                                                                                                                                                                                                                                                                   TDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSE
                                                                                                                                                                                                                                                                                                                                                                                                                           SRTSLLLAFGLLCLPWLQEGSADSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LVOKNVTSESTCCVAKSYNRVTVMGGFKVENHTACHCSTCYYHKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IENVKGTEDSGTTAGAAPGCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NLFQCFNCTLCLNGTVHLSCQEKQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLSLPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     76.4%;
llarity 89.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SYSTEMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jameson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 1667; DB 26;
Pred. No. 1.50e-169;
2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HOLDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TPO; human chorionic gonadotrophin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels 29;
                                                   256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      256;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                          240
                                                                                                                                                           211
                                                                                                                                                                                                                                                               164
                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ۲
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT TO SERVICE SERV
RESULT RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 19
                                                                   EP-393438-A.
24-CCT-1990.
06-APR-1990: 106624.
21-APR-1989: DE-913101.
21-JUN-1999: DE-920282.
(BOEH ) BOEHRINGER INGELHEIMINT.
Hauptmann R, Himmler A, Maurer-Fo
WPI, 90-321987/43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R07449
R07449;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W33360 stand:
W33360;
19-MAR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-AUG-1997; U02315.
20-FEB-1996; US-011936.
20-FEB-1996; US-011936.
(ISTF ) ARS APPLIED RES SYSTEMS HOLDING NV.
(Campbell RK, Chappel SC, Jameson BA;
WPI; 97-425036/39.
N-PSDB; T94022.
Hybrid dimeric protein comprising two co-expressed units - (
hybrid dimeric protein comprising two co-expressed units - (
hormone, especially FSH, for inducing follicular maturation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example; Pages 39-40; 60pp; English.

A novel fusion protein comprises 2 dimer forming co-expressed amino acid sequences, each consisting of a homodimeric or heterodimeric receptor chain or ligand, with ligand-receptor binding activity, bound directly or via a peptide linker to a subunit of a heterodimeric protein hormone capable of forming a heterodimer with the hormone's other subunits. The fusion protein, e.g. the thrombopoietin (TPO)/human chorionic gonadotrophin-beta subunit (hCG-beta) fusion protein demoted by the present sequence, significantly increases the biological activity of the hormone component, reducing the requirement for hormone itself and the number of injections needed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tumour Necrosis Factor-Binding Protein from pTNF-BP15 cDNA.
Tumour necrosis factor binding protein; TNF-BP; TNF-recepto
pTNF-BP15; infectious disease; parasitic disease; cachexia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \label{eq:total_total_total} $$ TBP(20-190)/hCG-beta fusion protein; thrombopoletin; TPO; human chorionic gonadotrophin; beta subunit; hCG-beta. \\ $$ Homo sapiens. $$
                                                                                                                                                                                                                                                                                                                                                                                                                             autoimmune disease; shock.
                                   WPI; 90-321987/43.
N-PSDB; Q06282.
                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-JAN-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nlfqcfncslclngtvhlscqekqntvctchagfflrenecvscsnckkslectklclpq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        srtslllafgilclpw1qegsadsvcpqgky1hpqnns1cctkchkgtylyndcpgpgqd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IENVKGTEDSGTTAGAAPGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ienvkgtedsgttagagprc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NLFQCFNCTLCLNGTVHLSCQEKQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLSLPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tdcrecesgsftasenhlrhclscskcrkemgqveissctvdrdtvogcrknqyrhywse 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SRTSLLLAFGLLCLPWLQEGSADSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       196;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard; Protein; 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               68.9%;
llarity 98.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
TNF binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entry)
                                                                                                           Maurer-Fogy
protein and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
Pred.
2; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               re 1505; DB 26;
d. No. 1.76e-151;
Mismatches 2;
                                                                                                               ŗ
       TNF -
   receptor -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels 0;
   used
   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           each
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

# # 5555555555555

```
PT a receptor peptide.

PS Example A: Page 53-54; 93pp; English.

CC Hybrid peptides for binding cytokines, comprising a malaria parasite CC (Plasmodium falciparum) peptide (capable of binding to a red blood CC cell (RBC)) and a receptor peptide are claimed. R70103-25 are examples CC of these hybrid peptides. R70107 is a fusion of tumour necrosis factor CC receptor (in accordance with H Loetscher et al Cell, Vol. 61, 351-359) CC and glycophorin binding protein (GBP) 130. The use of cytokine CC receptors not normally found on RBCs means that the cytokine can bind CC mannlessly to the RBC without deleterious effect. The RBC protects the CC hybrid peptides from excretion from the kidney, and due to steric CC hindrance prevents the cytokines binding to a receptor in another cell. CG GBP 130 or GBPH (GBP homologue) are the prefd. malaria parasite peptides CC used, others include EBA 175 (175 kDa erythrocyte binding antigen), CC receptor molecule (eg. exhibited by plasmodium vivax). These peptides CC bind to pref. glycophorin A, B and C, sialo glycoproteins, found on CC the surface of free cytokines in the circulation to reduce pathological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W09506737-A.

09-MAR-1995.

01-SEP-1994; G01900.

03-SEP-1993; GB-018350.

23-AUG-1994; GB-017021.

(PREN/) PRENDERGAST K F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R70107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tumour treatment and to understand mechanismsm to TNF action Disclosure; Fig 1(1-3); Slpp; German.
Clone pTNF-BPI5 was used to contruct paDTNF-BP, for transfection of e.g. COS7 cells. The expressed proteins are useful prophylactically and therapeutically to control disorders which involve the damaging effects of TNF-alpha or beta (e.g. infectious or parasitic diseases, shock, cachexia, autoimmune diseases, adult respiratory distress syndrome etc., or side effects of treatment with TNG-alpha). They can also be used as diagnostic reagents for assaying TNF and in study of TNF-receptor interactions. See also Q06582-Q06285.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GBP 130; GBPH; glycophorin bind
Chimeric Homo sapiens.
Chimeric Plasmodium falciparum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TNF-R-GBP 130 fusion protein.

TNF-R-GBP 130 fusion protein.

Hybrid peptide; malaria parasite; Plasmodium falciparum; fusion protein; red blood cell; cytokine receptor; glycophorin binding peptide 130; GBPH; glycophorin binding peptide homologue; glycophorin A.
                                                                                                                                                                                                                                                                                                                                                                                               New hybrid peptide(s) for binding cytokine(s) - malaria parasite peptide capable of binding a re
 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 95-115452/15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Prendergast KF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       169; Conservative
 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         59.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entry;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 1306; DB 2;
Pred. No. 2.45e-129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                               s) - comprisinga red blood cel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                 cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                     and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

Query Match

59

Score

1305;

B

13;

Length 451

Query Match
Best Local Similarity
Matches 169; Conser

59.8%; ilarity 98.8%; Conservative

Score 1306; DB 4; Pred. No. 2.45e-129; 1; Mismatches 1;

Length 455 Indels

0

Gaps

0

Š 밁 Š 밁 Ş 밁

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
PT treating autoimmune disease, septic shock, HIV etc.

PS Example; Fig 1; 43pp; English.

CC This sequence was deduced from human TNF-alpha cDNA isolated as in C24440-51, R24000, R24080-84, R27585, Q29236-8

Sexample; Fig 1; 43pp; English.

CC This sequence was deduced from human TNF-alpha cDNA isolated as in C2440-51, R24000, R24080-84, R27585, Q29236-8

CC And probably represent a signal sequence. Residues 35-40 are highly cc charged (DREKR) and this is not normally found in secretory cc signal sequences. It is possible the receptor is processed by proteolysis after residue 40 which contains a dibasic cleavage site (RR). Hydropathy analysis of this sequence predicts a single transmembrane domain of 171 residues and a cytoplasmic domain of C21 residues. The sequence contains a large number of cysteine cresidues, the arrangement of which is similar to that of other cell cresidues, the arrangement of which is similar to that of other cell cresidues, the arrangement of which is similar to that of other cell cresidues of family of receptors.

CNOTE: Residues 37,2 given in the sequence as T,L, are encoded by Sequence 455 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 98.3%; Matches 169; Conservative
                                                                                                                                                                                                                                                                                                                                      18-OCT-1991; GO1826.
18-OCT-1990; GB-022648.
(CHAR-) CHARING CROSS SU
Brennan FM, Feldmann M,
WPI; 92-167156/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tumour necrosis factor alpha; extracellular binding domain; treatment; pulmonary diseases; septic shock; HIV infection; malaria; viral meningits; graft versus host disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R24000 standard;
R24000;
05-NOV-1992 (fir
                                                                                                                                                                                                                                                                                           New polypeptide capable of binding human TNF alpha first three cysteine-rich subdomains of TNF alpha r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          autoimmune disease;
                                                                                                                                                                                                                                                                                                                          N-PSDB; Q24440
                                                                                                                                                                                                                                                                                                                                                                                                                                                              domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TNF-alpha 55kD
                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9207076-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            kqntvctchagfflrenecvscsnckkslectklclpqienvkgtedsgtna
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "potential"
212.234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /label= signal peptide 54..56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /label= N linked glycosylation site
/note= "potential"
151. 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /label= N linked glycosylation site
/note= "potential"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rheumatoid arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entry)
                                                                                                                                                                                                                                                                                                                                                      S SUNLEY RES
M, Gray PW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                transmembrane domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₿
                                                                                                                                                                                                                                                                                                                                                        Turner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No. 3.16e-129; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                        MJC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          site
                                                                                                                                                                                                                                                                                           receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          79
```

```
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
       This sequence represents human p55 tumour necrosis factor (TNF-R).

Expression of this receptor is regulated by shedding of the extracellular receptor fragment. The p55 TNF-R can be shed in response to different inducing agents, e.g. phorbol myristate acetate (PMA), depending on cell type. The only region of the receptor whose structure affects the shedding response is the spacer region (see R75012) in the extracellular complete to the spacer region (see R75012) in the extracellular commain. This region is located close to a site of cleavage of the complete to a site of cleavage of the molecule, and links the Cys rich module to the transmembrane domain. The spacer region of the encoded protein was used to create the chimeras between human p55 TNF-R and murine epidermal growth factor receptor (EGF-R) that are represented by R75007-11. This spacer region was subjected to deletion mutations (R75013-25) and substitutions (R75026-47). Of the spacer region, the most important residues are cash of the spacer region of the most important residues are cash of the spacer region of the spacer is independent of the side chain identity of these residues, with the exception of a limited dependence on the latestity of these residues.
                                                                                                                                                                                                                                                                                 New protease capable of cleaving soluble tumour necrosis factor (TNF) receptor - from cell-bound TNF- receptor, useful for antagonising deleterious effects of TNF.

Disclosure: Fig 1; 40pp; English.
                                                                                                                                                                                                                                                                                                                                                         WPI; 95-194342/26.
N-PSDB; Q90513.
                                                                                                                                                                                                                                                                                                                                                                                       (YEDA ) YEDA RES & DEV CO LTD.
Batkin M, Brakebusch C, Varfolomeev E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 epidermal growth factor receptor; phorbol myristate acetate; PMA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R75084 standard;
R75084;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AU9475742-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                          11-OCT-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tumour necrosis factor receptor; TNF-R; human; murine; chimera; srmal growth factor receptor; EGF-R; protease; inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          dsvcpqgkylhpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhcl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      kqntvctchagfflrenecvscsnckkslectklclpqienvkgtedsgtt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclnqtvhlscqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KONTYCTCHAGFFLRENECYSCSNCKKSLECTKLSLPQIENVKGTEDSGTT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCTLCLNGTVHLSCQE
ဓ္ဓ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "spacer region"
201
/note= "major C termin
202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "minor C terminus for soluble p55 TNF-R" 212..234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "essential for shedding reaction" 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note=
193..2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note= "9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note- "glycosylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               198..210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                note= "N terminus of soluble
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein; 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "transmembrane region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "peptide used in creation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "glycosylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "glycosylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            terminus for soluble
Mutations
                                                                                                                                                                                                                                                                                                                                                                                         Wallach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                p55 TNF-R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of chimeras"
                                                                                                                                                                                                                                                                                                                                                                                         Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            p55 TNF-R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82
```

밁

41

dsvcpqgky1hpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhcl 100

```
ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       នននននន
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 16
               Query Match
Best Local :
 Matches
                                                                            e.g. rheumatoid arthritis
Disclosure; Fig 1; 25pp; English.
The amino acid sequence is that of tumour necrosis factor alpha
binding protein which contains the extracellular domain of human TNF
alpha receptor. It is soluble and can be used in the regulation of
TNF-mediated responses by binding and sequestering the cytokine. It
can therefore be used therapeutically to treat disorders such as
cachexia, sepsis and autoimmune diseases, specifically rheumatoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               conformation of the protein adversely effect the shedding process. The mutations shown in R75013-47 were introduced in order to create an inhibitor of a protease that is capable of cleaving the soluble TNF-R from the cell bound TNF-R. Fragments of these inhibitors can be seen in R75017-9, R75025, R75033-5 and R75042-3. These protease inhibitors can be used for enhancing TNF function.
                                                                                                                                                                                                                             15-JUN-1990; 013410.
15-JUN-1990; GB-013410.
(CHAR:) CHARING CROSS SUNLE.
Feldman M, Gray P, Turner M,
WPI; 92-043513/06.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tumour necrosis extracellular do
                                                      Sequence
                                                                    arthritis.
                                                                                                                                                                                         New tumour necrosis factor alpha binding protein and polypeptide useful in treating cachexia, sepsis and auto immune diseases
                                                                                                                                                                                                                     N-PSDB; Q20973
                                                                                                                                                                                                                                                                                                                                       modified_site
                                                                                                                                                                                                                                                                                                                                                                 modified_site
                                                                                                                                                                                                                                                                                                                                                                                             domain
                                                                                                                                                                                                                                                                                                                                                                                                                      domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TNF-alpha binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R20787 standard;
R20787;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-MAY-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       scskcrkemgqveissctvdrdtvcgcrkngyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     kqntvctchagfflrenecvscsnckkslectklclpqienvkgtedsgtt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           dsvcpqgky1hpqnns1cctkchkgtylyndcpgpgqdtdcrecesgsfftasenhlrhcl 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLSLPQIENVKGTEDSGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  l Similarity
169; Conser
               Similarity
                                                      455 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 domain.
                                                                                                                                                                                                                                                                                                                                                                                           /note- "e
212..234
                                                                                                                                                                                                                                                                                                                         /note= "potential N-glycosylation 151..153 /note= "potential N-glycosylation /note=""
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ig protein.
factor alpha; autoimmune
                                                                                                                                                                                                                                                                                                                                                                   145..147
                                                                                                                                                                                                                                                                                                                                                                                                                                  /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Protein; 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                59.8%;
             98
                                                                                                                                                                                                                                                                                                                                                                                                                      . 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                 455
               8 8
                                                                                                                                                                                                                                                                                                                                                                                                          "extracellular domain"
                                                                                                                                                                                                                                                                                                                                                                              "transmembrane domain'
                                                                                                                                                                                                                                                                                                                                                                                                                                  "mature peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                           "signal peptide"
                                                                                                                                                                                                                                                                                                                         "potential N-glycosylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
Pred.
1; M
Score 1306; DB 4;
Pred. No. 2.45e-129;
1; Mismatches 1;
                                                                                                                                                                                                                                              Brennan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₹
                                                                                                                                                                                       sepsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1306; DB 14;
No. 2.45e-129;
                                                                                                                                                                                                                                            T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              diseases; cachectin;
                           Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
  Indels
                                                                                                                                                                                                                                                                                                                                                      site*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
  0
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                     TNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                     8
                                                                                밁
                                                                                                            Query Match
Best Local S
Matches 16
                                                                                                                                                                                                               The linker may comprise 5-100 amino acids selected from Gly, Asp, Ser, Thr and Ala. These linkers separate the individual moeities by such a distance that each component of the fusion protien is capable of folding into the secondary or tertiary structure required for its biological activity. These fusion proteins may be used in therapy, diagnosis and assays for conditions mediated by TNF or II-1, particularly in conditions in which both TNF and II-1 play a causitive role. They may be used to treat cachexia, rheumatoid arthritis, diabetes, multiple sclerosis, pulmonary fibrosis and silicosis, cerebral malaria, allograft and xenograft rejection in graft verses boost disease senses and silicosis, the conditions in the sense cachexia and senses and silicosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                           New fusion protein tumour necrosis factor and human interleukin-1 receptor - useful in therapy, diagnosis and assays of e.g. rheumatoid arthritis, dilabetes, cerebral malaria, sepsis, etc. Disclosure; Page 57-59; 85pp; English.

The sequences given in R42058-59 repressent human tumour necrosis factor receptor (TIF-R) and the sequences in R42060-61 represent human interleukin-1 receptor (IL-IR). These sequences were used in the production of a fusion protein which conformed to one of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; tumour necrosis factor receptor; TNF-R; interleukin-1 receptor; IL-1R; fusion protein; linker; TNF; IL-1, cachexia; cerebral malaria; rheumatoid arthritis; diabetes; multiple sclerosis; septic shock; pulmonary fibrosis; silicosis; allograft; xenograft; rejection; graft verses host disease; sepsis; inflammation; allergy;
                                                                                                                                                                                        autoimmune
                                                                                                                                                                                                                                                                                                                                                                                 IL-1R-linker-TNF-R-linker-TNF-R
TNF-R-linker-TNF-R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Smith CA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-OCT-1993.
26-MAR-1993; U02938.
30-MAR-1992; US-860710.
(IMMV) INMUNEX CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                  TNF-R-linker-TNF-R-linker-IL-1R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB; Q49932.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 93-336592/42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W09319777-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R42059;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R42059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      autoimmune dysfunction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lambda derived TNF-R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .ambda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143
                     101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              101
                                                 23
                                                                                41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23
scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe
                                               kqntvctchagfflrenecvscsnckkslectklclpqienvkgtedsgtt
                                                                                                                                                                                                       disease, sepsis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KONTVCTCHAGFFLRENECVSCSNCKKSLECTKLSLPQIENVKGTEDSGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYMSENLFQCFNCTLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                              169; Conse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gt10-7ctnfbp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard;
                                                                                                                                                                          dysfunctions. 455 AA;
                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note= "Signal peptide
41..455
/note= "Mature hTNF-R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Protein;
                                                                                                                           59.8%;
98.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entry)
                                                                                                                                                                                                      septic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    455
                                                                                                            Score
Pred.
1; %
                                                                                                                                                                                                      shock, inflammation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     peptide"
                                                                                                                                                                                                                                                                                                                                                                                                  မှ
                                                                                                         e 1306; DB 8; Le
.. No. 2.45e-129;
...r-+ches 1;
                                                                                                              Mismatches
                                                                                                                                       Length 455;
                                                                                                                                                                                                    allergies and
                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               211
                                                                                                            <u>.</u>
                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ä
                  160
                                                                             100
                                                 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             82
                                                                                                            0
```

```
RESULT IN A SUCCOCC OF THE PROPERTY OF THE PRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ğ
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tumour necrosis factor inhibitor - for suppression of TNF-alpha and beta, useful as therapeutic agent.

Disclosure; Fig 21; 142pp; English.

The sequence comprises the entire 30 kD TNF inhibitor. The clone from which the sequence was deduced was isolated from a cDNA library prepd. from RNA form U937 cells treated with PMA/PHA. The whole gene can be inserted into expression vectors for prepn. of TNF inhibitor for use in the treatment of inflammatory and degenerative diseases. The active protein is claimed (Claim 8). See also R10984 and R11001.
                                                                                                                                                                                                                                              Human 55kD TNF-binding protein.
Tumour Necrosis Factor; binding
autoimmune glomerulonephritis; l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-JUL-1990; 058976.
18-JUL-1989; US-381080.
11-DEC-1989; US-450329.
07-FEB-1990; US-479661.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R10986;
13-MAY-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R10986
                   region
                                                                   modified_site
                                                                                                             modified_site
                                                                                                                                                            modified_site
                                                                                                                                                                                                                                                                                                                           24-MAY-1991 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-PSDB; Q10883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (SYNE-) SYNERGEN INC. WPI; 91-073847/11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cleavage_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30kD TNF inhibitor precursor
                                                                                                                                                                                                      nodified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-JAN-199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41 dsvcpqgky1hpqnns1cctkchkgty1yndcpgpggdtdcrecesgsftasenh1rhc1 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         kqntvctchagfflrenecvscsnckkslectklclpqienvkgtedsgtt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KONTYCTCHAGFFLRENECVSCSNCKKSLECTKLSLPQIENVKGTEDSGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCTLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCTLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                        standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            59.8%;
larity 98.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
A
                 /label= |
212..230
                                                                /label-
270
                                                                                                               /label=
151
                                                                                                                                                            /label=
145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           note="
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40..4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                          Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cleavage gives
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            inhibitor.
                                       putative N-glycosylation
                                                                                      putative
                                                                                                                                                                                putative
                                                                                                                                   putative
                                                                                                                                                                                                                                                                                                                                                                          455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1306; DB 2;
Pred. No. 2.45e-129;
1; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                j proteins; septic shock;
lymphokine; cytokine.
                                                                                    N-glycosylation
                                                                                                                                 N-glycosylation
                                                                                                                                                                             N-glycosylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                active protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 455
                                                                                      site
                                          site
                                                                                                                                   site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 16
                                                                                                                                                                     W09506737-A.
09-MAR-1995
01-SEP-1994; G01900.
03-SEP-1993; GB-018350.
23-AUG-1994; GB-017021.
(PREN/) PRENDERGAST K F.
malaria parasite peptide capable of binding a red blood cell and a receptor peptide.

Example A; Page 46-47; 93pp; English.

Hybrid peptides for binding cytokines, comprising a malaria parasite (Plasmodium falciparum) peptide (capable of binding to a red blood cell (RBC)) and a receptor peptide are claimed. R70103-25 are examples of these hybrid peptides. R70103 is a fusion of tumour necrosis factor receptor (in accordance with H Loetscher et al Cell, Vol. 61, 351-359)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 1; Fig 1; 26pp; German.

Partial amino acid sequences were determined for the 55 and 75kD TNF-BPs (see R11072-R11081) and oligonuclectide primers were synthesised based on these partial sequences. The primers were used to produce a cDNA fragment for use as aprobe to screen a human placental cDNA bank constructed in Lambda gtll. Positive clones were identified and sequenced. DNA constructs comprising the TNF-BP coding sequence may also contain a fragment encoding a human Ig domain. Recombinant constructs are used to transform cells to confer improved TNF-binding properties.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; y1-v2-15
N-PSDB; Q10955.
Insoluble tumour necrosis
                                                                                                                                                                                                                                                                            TNF-R-CBP 130 fusion protein.
TNF-R-CBP 130 fusion protein;
Hybrid peptide; malaria parasite; Plasmodium falciparum; fusion protein;
red blood cell; cycokine receptor; glycophorin binding peptide 130;
red blood cell; cycokine receptor; plycophorin binding peptide homologue; glycophorin A.
                                                                                                                                                                                                                                                              GBP 130; GBPH; glycophorin binding Chimeric Homo sapiens.
Chimeric Plasmodium falciparum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (HOFF ) HOFFMANN-LA ROCHE AG.
Brockhaus M, Dembic Z, Gentz
Schlaeger EJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31-AUG-1990; 116707.
12-SEP-1989; CH-003319.
08-MAR-1990; CH-000746.
20-APR-1990; CH-001347.
                                                                                                             New hybrid peptide(s) for binding malaria parasite peptide capable of
                                                                                                                                                                                                                                                                                                                                                                        R70103;
                                                                                                                                                                                                                                                                                                                                                                                     R70103 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EP-417563-A.
20-MAR-1991.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          also Q10956.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8cskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  kqntvctchagfflrenecvscsnckkslectklclpqlenvkgtedsgtt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCTLCLNGTVHLSCQE
                                                                                                                                           95-115452/15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                KONTYCTCHAGFFLRENECYSCSNCKKSLECTKLSLPQIENYKGTEDSGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 l Similarity
169; Conse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          455 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 59.8%;
Llarity 98.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1..28
/label= signal peptide
                                                                                                                                                                                                                                                                                                                                                          entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       s factor binding
pharmaceutical |
                                                                                                                                                                                                                                                                                                                                                                                      900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 1306; DB 2;
Pred. No. 2.45e-129;
1; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lesslauer W,
                                                                                                           g cytokine(s) of binding a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       proteins .
prods. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lotscher

    comprising a
red blood cell

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PT a receptor peptide.

PS Example A; Page 54-55; 93pp; English.

CC Hybrid peptides for binding cytokines, comprising a malaria parasite CC (Plasmodium falciparum) peptide (capable of binding to a red blood CC (Plasmodium falciparum) peptide are claimed. R70103-25 are examples CC of these hybrid peptides. R70108 is a fusion of tumour necrosis factor CC receptor (in accordance with H Loetschar et al Cell, Vol. 61, 351-359) CC and glycophorin binding protein (GBP) homologue (GBPH). The CC use of cytokine receptors not normally found on RBCs means that the Cytokine can bind harmlessly to the RBC without deleterious effect.

CC The RBC protects the hybrid peptides from excretion from the kidney, and CC due to steric hindrance prevents the cytokines binding to a receptor in CC another cell. GBP 130 or GBPH are the prefd. malaria parasite peptides cused, others include EBA 175 (175 kDa erythrocyte binding receptor CC (pre major merozoite surface antigen) and the Duffy binding receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 16
                                                                                                                                                                                                                                                                                                                                                       01-SEP-1994; G01900.
01-SEP-1994; GB-018350.
03-SEP-1993; GB-017021.
23-AUG-1994; GB-017021.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TNF-R-GBPH fusion protein.

Hybrid peptide; malaria parasite; Plasmodium falciparum; fusion protein; red blood cell; cytokine receptor; glycophorin binding peptide 130; GBP 130; GBPH; glycophorin binding peptide homologue; glycophorin A; tumour necrosis factor receptor; TNF-R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  harmlessly to the RBC without deleterious effect. The RBC protects the hybrid peptides from excretion from the kidney, and due to steric hindrance prevents the cytokines binding to a receptor in another cell. GBP 130 or GBPH (GBP homologue) are the prefd. malaria parasite peptides used, others include EBA 175 (175 kDa erythrocyte binding antigen), PMMSA (pre major merozoite surface antigen) and the Duffy binding receptor molecule (eg. exhibited by Plasmodium vivax). These peptides bind to pref. glycophorin A, B and C, sialo glycoproteins, found on the surface of RBCs. The hybrid peptides are thus used to lower the levels of free cytokines in the circulation to reduce pathological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R70108
R70108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chimeric Homo sapiens.
Chimeric Plasmodium falciparum.
                                                                                                                                                                                                                                                                                  New hybrid peptide(s) for binding cytokine(s) - comprising a malaria parasite peptide capable of binding a red blood cell
                                                                                                                                                                                                                                                                                                                          Prendergast KF;
WPI; 95-115452/15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Key Location/Qualifiers misc_difference 230..269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and glycophorin binding protein (GBP) 130. receptors not normally found on RBCs means harmlessly to the RBC without deleterious c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           damage.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .0-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              scskcrkemgqve1ssctvdrdtvcgcrknqyrhywsen1fqcfncs1clngtvh1scqe 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        dsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhcl 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       kqntvctchagfflrenecvscsnckkslectklclpqienvkgtedsgtna
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KONTVCTCHAGFFLRENECVSCSNCKKSLECTKLSLPQIENVKGTEDSGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCTLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              169;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       900 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /label= repe
/note= "can
number"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3.36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               þe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
Pred.
1; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1305;
No. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 13;
3.16e-129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             n times, where
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The use of cytokine that the cytokine or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               œ
                                                                                                                                                                                                                                                                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bind
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   82
                           PMMSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

នន្តន្តន្ត

```
밁
                                                   Ş
                                                                                  밁
                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                         밁
                                                                                                                                                                                                                       PT DNA encoding TNF binding protein and TNF- receptor - used in tumour treatment and to understand mechanismsm to TNF action PS Disclosure; Fig 91(1-2); 51pp; German.

CC raTNF-R8 (Q06284) was used to screen the HS913T cDNA library.

CC construct a plasmid (pADTNF-R) expressing the product the same way cas paDTNF-B9 (see Q06282). The expressed proteins are useful prophylactically and therapeutically to control disorders which convolve the damaging effects of TNF-alpha or -beta (e.g. infectious or parasitic diseases, shock, cachexia, autoimmune diseases, adult respiratory distress syndrome etc., or side effects of treatment with CC assaying TNF and in study of TNF-receptor interactions.

CS see also Q06283-Q06285.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local :
                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-OCT-1990.

06-APR-1990; 106624.

21-APR-1989; DE-913101.

21-JUN-1989; DE-920282.

(BOEH ) BOEHRINGER INCELHEIMINT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             molecule (eg. exhibited by Plasmodium vivax). These peptides bind pref. glycophorin A, B and C, sialo glycoproteins, found on the su of RBCs. The hybrid peptides are thus used to lower the levels of cytokines in the circulation to reduce pathological damage. Sequence 309 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human Tumour Necrosis Factor-Receptor from lambdaTNF-R2 cDNA insert. Tumour necrosis factor binding protein; TNF-BB; TNF-receptor; Infectious disease; parasitic disease; cachexia; autoimmune disease; shock; lambdaTNF-R2; raTNF-R8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       T 14
R07451 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB; Q06285
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hauptmann R, Himmler A, Maurer-Fogy I, Stratowa WPI; 90-321987/43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-JAN-1991 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              161
                                                                                  101
                                                                                                              23
                                                                                                                                         41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             dsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhci 79
                                                   kqntvctchagfflrenecvscsnckkslectklclpqiqnvkgtedsgtt
                                                                                                                            dsvcpqgky1hpqnns1cctkchkgty1yndcpgpgqdtdcrecesgsftasenh1rhc1
                                                                                                           DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        l Similarity
168; Conser
                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    59.7%;
98.2%;
                                                                                                                                                                                  59.7%;
                                                                                                                                                                  Score 1303; DB 2;
Pred. No. 5.28e-129;
2; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1303; DB 13;
Pred. No. 5.28e-129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 309;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                    Indels
193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ne surface
of free
                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                 160
                                                                                                             82
                                                                                                                                         100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                     0
```

S

Search completed: Wed Job time: 97 secs.

мау σ Ş

Ş

```
IDENTIFICATION OF THE SULT TARGET OF THE SULT TARGE
                                                                       밁
                                                                                                                                      Ş
                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                밁
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Prendergast KF;
PI Prendergast KF;
PI Prendergast KF;
DR WPI; 95-115452/15.

PR WPI; 95-115452/15.

PT Mew hybrid peptide(s) for binding cytokine(s) - comprising a malaria parasite peptide.
PT malaria parasite peptide capable of binding a red blood cell and PT a receptor peptide.
PT a receptor peptides for binding cytokines, comprising a malaria parasite (c) (Plasmodium falciparum) peptide (capable of binding to a red blood (c) cell (RBC)) and a receptor peptide are claimed. R70103-25 are examples (c) of these hybrid peptides. R70104 is a fusion of tumour necrosis factor receptor (in accordance with H Loetscher et al Cell, Vol. 61, 351-359) (c) condition to the capable of binding to a red blood (c) cytokine receptors not normally found on RBCs means that the Cytokine receptors to the hybrid peptides from excretion from the kidney, and C another cell. GBP 130 or GBPH are the cytokines binding to a receptor in complex consists and consists and consists parasite peptides used, others include EBA 175 (175 kDa erythrocyte binding antigen), PMMSA (pre major merozoite surface antigen) and the Duffy binding receptor cof RBCs. The hybrid peptides antigen) and the Duffy binding receptor cof RBCs. The hybrid peptides antigen) and the puffes bind to cof series. Physiological damage. Sequence 547 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ID R70104 standard; Protein; 547 AA.

R70104;

RC R70104;

RC R70104;

RC R70104;

RC R70104;

RO 2-NOV-1995 (first entry)

DE TWP-R-GBPH fusion protein.

KW Hybrid peptide; malaria parasite; Plasmodium falciparum; fusion protein;

KW red blood cell; cytokine receptor; glycophorin binding peptide 130;

KW red blood cell; cytokine receptor; peptide homologue; glycophorin A;

KW GBP 130; GBPH; glycophorin binding peptide homologue; glycophorin A;

KW tumour necrosis factor receptor; TWF-R.

OS Chimeric Homo sapiens.

OS Chimeric Plasmodium falciparum.

PN W09506737-A.

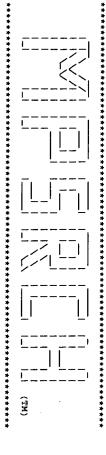
ROS-1995.

PR 03-SEP-1994; GB-018350.

PR 23-AUG-1994; GB-018350.

REEN/) PRENDERGAST K F.
                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 16
   143
                                                                                                                                          83
                                                                                                                                                                                                                 90
                                                                                                                                                                                                                                                                                         23
                                                                                                                                                                                                                                                                                                                                                                20
                                     kqntvctchagfflrenecvscsnckkslectklclpqienvkgtedsgts 190
                                                                                                                                      KONTVCTCHAGFFLRENECVSCSNCKKSLECTKLSLPQIENVKGTEDSGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                   ch 59.7%;
l Similarity 98.2%;
168; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1303; DB 13;
Pred. No. 5.28e-129;
2; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                         82
                                                                                                                                                                                                                                                                                                                                                            79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PMMSA
                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

#### THIS PAGE BLANK (USPTO)



Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

Run on: MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm Wed May 6 09:00:43 1998; MasPar time 12.89 Seconds 807.727 Million cell updates/sec

Tabular output not generated.

Description: Perfect Score: Sequence: >US-08-804-166-6 (1-285) from USO8804166.pep 2183 1 SRTSLLLAFGLLCLPWLQEG......GFKVENHTACHCSTCYYHKS 285

Scoring table: PAM 150 Gap 11

Searched:

120446 seqs, 36531193 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database:

pir56 1:pir1 2:pir2 3:pir3 4:pir4 5:nrl3d

Statistics: Mean 40.957; Variance 71.278; scale 0.575

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

22211871532111 2221187654321 32210	Result No.
1306 1221 1122 11096 11096 10944 944 944 650 650 652 543 544 544 544 544	Score
22222222222222222222222222222222222222	Query Match L
145 158 158 158 142 139 144 454 454 454 454 454 454 454 115 115	Length I
2772777720555777205555	EG .
IEXTA IEXTA IEXTA IEXTA IEXTB ITNCFB ITNCFB ITNCFA INCFA INC	ij
tumor necrosis factor plycoprotein hormones chorionic gonadotropi tumor chorionic gonadotropi tumor protein hormones glycoprotein hormones	Description
1.60e-278 3.27e-253 3.27e-233 1.62e-233 1.62e-229 7.85e-229 7.85e-239 1.20e-207 2.33e-191 2.33e-191 2.33e-1121 3.63e-127 1.23e-121 3.63e-121 3.63e-121 3.63e-121 3.63e-121 3.63e-121 4.44e-98 4.44e-98 4.44e-98 5.39e-97 1.86e-96 1.86e-96	Pred. No.

45	44	43	42	41	40	39	38	37	36	<b>3</b> 5	34	<u>ω</u>	32	31	30	29	28	27	26	25	24
212	214	221	225	228	245	434	448	448	450	452	474	479	478	500	500	500	503	505	507	537	537
9.7	9. 8	10.1	10.3	10.4	11.2	19.9	20.5	20.5	20.6	20.7	21.7	21.9	21.9		•		•	•	•	24.6	•
427	349	326	325	38	435	117	114	108	114	119	117	97	93	118	118	118	96	120	118	120	120
щ	N	ш	N	N	N	N	N	N	N	ພ	ພ	N	N	N	Н	N	L	N	N	N	N
GQHUN	D36858	GQVZML	B43692	A60583	154182	150992	I51230	A60627	B60627	151229	A37198	S20287	S07091	A60626	UTCAA	S16762	TTHOA	S53062	A40554	I51241	A45585
nerve growth factor r	ğ	T2 protein - myxoma v	T2 protein - rabbit f	glycoprotein hormones			gonadotropin alpha 2	glycoprotein hormones		gonadotropin alpha 1	glycoprotein hormones		glycoprotein hormones	glycoprotein hormones	glycoprotein hormones	gonadotropin alpha ch	glycoprotein hormones	glycoprotein hormones	glycoprotein hormones	pituitary glycoprotei	glycoprotein hormones
3.08e-23	1.20e-23	4.42e-25	6.62e-26	1.59e-26	4.53e-30	1.13e-71	7.40e-75	7.40e-75	2.59e-75	9.07e-76	8.53e-81	6.10e-82	1.03e-81	9.19e-87	9.19e-87	9.19e-87	1.88e-87	6.50e-88	2.25e-88	2.67e-95	2.67e-9

# ALIGNMENTS

RESULT

#journal H.; Koh #journal Cell (199 #title Molecular tumor n #cross-references MUID: #accession A34900 ##molecule_type mRNA ##residues 1-45 ##cross-references G	#accession A34899 ##molecule_type mRNA ##residues 1-45 ##cross-references G ##cross-references G ##experimental_sourc ##note part ##note A34900 #authors Schall, T #outhors Schall, T	##CCESSION A38208 ##TOCESION A38208 ##TESIQUES 1-4 ##CTOSS-TEFERENCE A34899 #authors Loetsche #Journal Cell (19 #title Nolecula #cross-references MUID	
#.; Kohr, W.J.; Goeddel, D.V. #title Cell (1990) 61:361-370 Molecular cloning and expression of a receptor for human tumor necrosis factor. #cross-references MUID:90235285 #accession A34900 ##molecule_type mRNA ##residues 1-455 ##label SCH ##cross-references GB:M33294; NID:g339744; PID:g339745	cession A34899 ##molecule_type mRNA ##residues 1-455 ##label LOE ##cross-references GB:M58286; GB:M33480; NID:g339753; PID:g339754 ##experimental_source placenta ##experimental_source placenta part of this sequence, including the amino end of the mature protein, confirmed by protein sequencing NCE A34900 NCE A34900 NCE A34900 NCE A34900 NCE A34900 A34900 A34900 ROP, G.H.W.; Gatanaga, T.; Granger, G.A.; Lentz, R.; Raab,	#accession A38208 #accession A38208 ##molecule_type DNA ##residues 1-455 ##label FUC ##cross-references GB:M75864; GB:M75865; GB:M75866; NID:g339748;  ERENCE A34899 #authors Loetscher, H.; Pan, Y.C.E.; Lahm, H.W.; Gentz, R.; Brockhaus, #authors M.; Tabuchi, H.; Lesslauer, W. #journal Cell (1990) 61:351-359 #title Nolecular cloning and expression of the human 55 kd tumor #title necrosis factor receptor. #cross-references MUID:9035284	GQHUT1 #type complete  tumor necrosis factor receptor type 1 precursor - humanALTERNATE_NAM  tumor necrosis factor alpha inhibitor; tumor necrosis factor  binding protein 1 (TNF blocking factor)  #formal_name Homo sapiens #common_name man  30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change  24-Oct-1997  A38208; A34899; A34900; A36555; C36555; A38281; S12057;  JT0758; A60231; A38258; A60594; A35010; JC2404  A38208  Fuchs, P.; Strehl, S.; Dworzak, M.; Himmler, A.; Ambros, P.F.  Genomics (1992) 13:219-224  Structure of the human TNF receptor 1 (p60) gene (TNRF1) and localization to chromosome 12p13.

```
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *Journal EMBO J. (1990) 9:3269-3278

*title Soluble forms of tumor necrosis factor receptors (TNF-Rs).
The cDNA for the type I TNF-R, cloned using amino acid sequence data of its soluble form, encodes both the cell surface and a soluble form of the receptor.

*cross-references MUID:91006021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #authors
#journal
                                                                                                                                                                                                                                                                  #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #authors Himmler, A.; Maurer-Fogy, I.; Kroenke, M.; Scheurich, P.
Pfizenmaier, K.; Lantz, M.; Olsson, I.; Hauptmann, R.;
Stratowa, C.; Adolf, G.R.

#journal DNA Cell Biol. (1990) 9:705-715
Molecular cloning and expression of human and rat tumor necrosis factor receptor chain (p60) and its soluble derivative, tumor necrosis factor-binding protein.
#cross-references MUID:91090841
#accession A36555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #journal Proc. Natl. Acad. Sci. U.S.A. (1990) 87:7380-7384
#title Cloning of human tumor necrosis factor (TNF) receptor cDNA
#title and expression of recombinant soluble TNF-binding protein.
#cross-references_MUID:91017509
                                                                                                                                                            #accession
                                                                                                                                                               #cross-references MUID:90292116
#accession A60231
                                                                                                                                                                                                                                                                                                                                                                                                                                                       #accession
                                                                                                                                                                                                                                                                                                                                                 #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ##molecule_type protein
##residues 30-38;41-53,'X',55-79,'XX',82-94,'NK';'XX',100-104;
##residues 107-128:162-167,'X',169-201 ##label HI2

##note the purified protein, called tumor necrosis factor
binding protein, is a soluble derivative of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ##motecute_1/r .......
##cross references EMBL:X55313; NID:g37223; PID:g37224
##note parts of soluble TNF binding protein 1.
#mote parts of soluble and carboxyl ends, were confirm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              **residues 1-455 **label **cross-references GB:M63121; C36555
                                                                                                                                                                                                                                                                                                                                                                                               **residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ##molecule_type mRNA
                                                                                                         **residues
                                                                                                                            ##molecule_type protein
                                                                                                                                                                                                                                                                                                                                                                                                                       ##molecule_type DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ##residues 1-455 ##label GRA
##cross-references GB:M37764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       **molecule_type mRNA
Gatanaga, T.; Hwang, C.; Kohr, W.; Cappuccini, F.; Lucci III,
J.A.; Jeffes, E.W.B.; Lentz, R.; Tomich, J.; Yamamoto,
R.S.; Granger, G.A.
                                                                                A38258
                                                                                                                                                                                                       Eur. J. Immunol. (1990) 20:1167-1174

Tumor necrosis factor inhibitor: purification, NH-2-terminal amino acid sequence and evidence for anti-inflammatory and immunomodulatory activities.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  JT0758
Kemper, O.; Wallach, D.
Gene (1993) 134:209-216
Cloning and partial characterization of the promoter human p55 tumor necrosis factor (TNF) receptor.
JT0758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A38281
Gray, P.W.; Barrett, K.; Chantry, D.; Turner, M.; Feldmann,
                                                                                                                                                                                                                                                                                                                                           Seckinger, P.; Vey, E.; Turcatti,
                                                                                                                                                                                                                                                                                                                                                                         A60231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A38281
                                                                                                                                                                                                                                                                                                                   J.M
                                                                                                                                                                                                                                                                                                                                                                                               1-13 ##label KEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the authors translated the codon TGG for residue 371 as Thr, AAG for residue 372 as Leu, and GAC for residue 427 as Asn
                                                                                                         41-43,'X',45-53,'X',55-57 ##label SEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HIM
NID:g339755; PID:g339756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            binding protein 1, including its ends, were confirmed by protein
                                                                                                                                                                                                                                                                                                                                           G.; Wingfield,
                                                                                                                                                                                                                                                                                                                                   P.; Dayer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the
```

```
KEYWORDS
FEATURE
1-21
                                                                                                 SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                        Query Match 59.8%;
Best Local Similarity 98.8%;
    Matches
                                                                                                                                                                                      84-126
127-167
168-196
212-234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #journal
#title
                                                                                                                                                                                                                                                                                                                                 30-211
41-201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #authors
                                                                                                                                             54,145,151
                                                                                                                                                                                                                                                                                     44-82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #journal proc. Natl. Acad. Sci. U.S.A. (1990) 87:8781-8784

#urification and characterization of an inhibitor (soluble tumor necrosis factor receptor) for tumor necrosis factor and lymphotoxin obtained from the serum ultrafiltrates of human cancer patients.

#cross-references MUID:91062364

#accession A38258
                                                                                                                                                                                                                                                                                                                                                                                                       22-455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #cross-references MUID:90110215
#accession A35010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #accession
                                                                                                                                                                   235-455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ##experimental_source urine
This protein is one of two known receptors
(cachectin) and TNF-beta (lymphotoxin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ##molecule_type protein
##residues 41-43,'X',45-53,'V',55-57,'XK',60
##experimental_source renal failure patient urine
RNCE A35010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ##molecule_type protein
##residues 41-45 ##label ENG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ##experimental_source cancer patient serum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ##residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ##molecule_type protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ##molecule_type protein
##residues 41-53,'x',55-144,'x',146-150,'x',152-186,'x',188-201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Olsson, I.; Lantz, M.; Nilsson, E.; Peetre, Grub, A.; Adolf, G.
Eur. J. Haematol. (1989) 42:270-275
Isolation and characterization of a tumor ne binding protein from urine.
A60594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kajihara, J.; Asada, A.; Kirihara, S.; Kato, K.
Biosci. Biotechnol. Biochem. (1994) 58:2266-2268
Amino acid sequence of natural tumor necrosis factor alpha
inhibitor purified from human urine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Engelmann, H.; Novick, D.; Wallach, D.
J. Biol. Chem. (1990) 265:1531-1536
Two tumor necrosis factor-binding proteins purified from human urine. Evidence for immunological cross-reactivity with cell surface tumor necrosis factor receptors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A60594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JC2404
                                                                                            #length 455
  Conservative
                                                                                                                                   #domain extracellular *status predicted *label EXT\
*product TNF binding protein 1 (tumor necrosis factor
alpha inhibitor) *status experimental *label TBP1\
*domain NGF receptor repeat homology *label NG2\
*domain NGF receptor repeat homology *label NG3\
*domain NGF receptor repeat homology *label NG3\
*domain NGF receptor repeat homology *label NG4\
*domain NGF receptor repeat homology *label NG4\
*domain NGF receptor repeat homology *label NG4\
*domain transmembrane *status predicted *label NEM\
*domain intracellular *status predicted *label INT\
*binding_site carbohydrate (Asn) (covalent) *status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41-60 ##label GAT
                                                                                                                                                                                                                                                                                                                                                                             #domain signal sequence #status predicted #label SIG\
#product tumor necrosis factor receptor type 1 #statu
predicted #label MAT\
                                                                                                                    predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ##label KAJ
                                                                                            #molecular-weight 50494 #checksum 153
                     Score 1306; DB 1; 1
Pred. No. 1.60e-278;
  1; Mismatches
                                           Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        for both TNF-alpha
  Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ##label
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             necrosis factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C.; Thysell, H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   210
                                                                                                                                                                                                                                                                                                                                                                                                       1 #status
Gaps
  0
```

뭥

41 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100

```
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                       FEATURE
                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PDB_TITLE
                 18-31
21-40
43-58
61-76
64-84
105-112
105-115
127-138
141-154
                                                                                                                                                                                                                                                                                                                                                                                                                                               #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #authors
#journal
#title
                                                                                                                                                                                                                131-134,137-140
25-29,39-42
71-74,83-85
90-96,99-104
                                                                                                                                                                                                                                                                           141-143
151-154
7-9,17-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #cross-references PDB:1EXT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #authors
                                                                                                                                                                                                    1-115,124-127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23
                                                                                                                                                                                                                                                                                                                                       Determination: 1.85 angstroms
Determination: X-ray diffrac
R-value: no refinement
binding protein: Correct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCTLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                 H.J.; Broger, C.; Loetscher, H.; Lesylauel, R. Cell (1993) 73:431-445
Crystal structure of the soluble human 55 kd TNF receptor human TNFbeta complex: implications for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 K.; Naismith, J.H.; Sprang, S.R.
J. Mol. Biol. (1994) 239:332
Two crystal forms of the extracellular domain of type i tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Naismith, J.H.; Devine, T.Q.; Brandhuber, F. J. Biol. Chem. (1995) 270:13303
Crystallographic evidence for dimerization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tumor necrosis factor receptor extracellular domain, chain a extracellular domain of the 55kda tumor necrosis factor receptor. crystallized at ph3.7 in p 21 21 aftermal_name Homo sapiens #common_name man expressed in Escherichia coli, the construct contains residues 12 to 172 of the mature sequence of the entire receptor. residue 11 is mutated to met as a result of the
   #length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Banner, D.W.; D'Arcy, A.; Janes, W.; Gentz, R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A40737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rodseth, L.E.; Brandhuber, B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TN026249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TN026248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Naismith, J.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A65560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1EXTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        necrosis factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       expression system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tumor necrosis factor receptor.
                                                                                                                                                                                            #region helix (right hand 3-10)\
#region helix (right hand 3-10)\
#region helix (right hand alpha)\
#region beta sheet\
               #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
                                                                                        #disulfide_bonds\
#disulfide_bonds\
                                                                                                                                                      #disul
                                                                                                                                                                                                                                                                                                                                                   protein; cytokine; signalling
                                                                                                                                                                                                                                                                                                                                                                                 X-ray diffraction
                                                                                                                                                 lfide_bonds\
lfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #type complete
                                                                                                                                    tide_bonds/
*molecular-weight 18065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sprang, S.R.
e Brookhaven Protein Data Bank, July 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Brandhuber, B.J.; Sprang, S.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Devine,
 #checksum
                                                                                                                                                                                                                                                                                                                                                   protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T.Q.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of unliganded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eck, M.J.; Hale
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schoenfeld,
                                                                                                                                                                                                                                                                                                                                                                                                                              TNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             82
                                                                                                                                                                                                                                                                      COMMENT
KEYWORDS
                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                         FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PDB_TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
```

```
143-145
9-11,19-21
9-13-136,139-142
133-136,139-142
27-31,41-44
73-76,85-87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #journal
#title
                                                                                                                                                              92-98,101-106
113-117,126-129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #cross-references PDB:1EXT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       144 QNTVCTCHAGFFLRENECVSCSNCKKSLECTKLSLPQIEN 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIEN 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
                                                                                                                                                                                                                                                                                                                                           R-value: no refinement binding protein; cytokine;
                                                                                                                                                                                                                                                                                                                                                                                     Determination: X-ray diffraction
                                                                                                                                                                                                                                                                                                                                                                                                    receptor activation. Resolution: 1.85 angstroms
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   h 56.8%;
Similarity 98.8%;
158; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     H.J.; Broger, C.; Lo
Cell (1993) 73:431-445
                                                                                                                                                                                                                                                                                                                                                                                                                                         Crystal structure of the soluble human 55 kd TNF receptor-human TNFbeta complex: implications for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                K.; Naismith, J.H.; Sprang, S.R.

J. Mol. Biol. (1994) 239:332

Two crystal forms of the extracellular domain of necrosis factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Naismith, J.H.; Devine, T.Q.; Brandhuber, B.J.; Sprang, S. Biol. Chem. (1955) 270:13303
Crystallographic evidence for dimerization of unliganded tumor_necrosis factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tumor necrosis factor receptor extracellular domain, chain I extracellular domain of the 55kda tumor necrosis factor receptor. crystallized at ph3.7 in p 21 21 21. #formal_name Homo sapiens #common_name man expressed in Escherichia coll, the construct contains residues 12 to 172 of the mature sequence of the entire receptor, residue 11 is mutated to met as a result of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Banner, D.W.; D'Arcy, A.; Janes, W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A40737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rodseth, L.E.; Brandhuber, B.; Devine,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TN026252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Naismith, J.H.; Sprang, S.R. submitted to the Brookhaven Protein Data Bank, July 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A65560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TN026251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          expression system
                                                                                                                                                        #region helix (right hand 3-10)\
#region helix (right hand 3-10)\
#region beta sheet\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
                                                              #disulfide_bonds\
                                                                             #disulfide_bonds\
                                                                                                                         ‡disu.
                                                                                                                      fide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #type complete
                                                                                                                                           ide_bonds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 1241; DB 5;
Pred. No. 8.41e-263;
1; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Loetscher, H.;
                                                                                                                                                                                                                                                                                                                                         signalling protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Brandhuber, B.J.; Sprang, S.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lesslauer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 160;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gentz, R.; Schoenfeld,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 T.Q.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eck, M.J.; Hale
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       type i tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                               TNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ᇤ
```

```
COMMENT
KEYWORDS
FEATURE
2-16
17-30
20-39
42-57
60-75
60-75
10-75
104-116
107-124
 Ş
                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                 뭕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ALTERNATE_NAMES
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 15
                                                                   Matches
                                                                                  Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                             #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               143-156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *cross-references PDB:1NCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #authors
#submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122 KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLP 158
   25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23
                1 VCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSPTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
VCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCTLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KONTVCTCHAGFFLRENECVSCSNCKKSLECTKLSLP
                                                                                                                                                                                                                                                                                                                                                           Resolution: 2.25 angstroms
Determination: X-ray diffraction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 155;
                                                               h 51.3%;
Similarity 99.3%;
141; Conservative
                                                                                                                                                                                                                                                                                                                             -value: no refinement
  binding protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             56.0%;
Similarity 98.7%;
                                                                                                                                                                                                                                                                                                                                                                                                   H.J.; Broger, C.; Loetscher, H.; Lesslauer, W. Cell (1993) 73:431-445
Crystal structure of the soluble human 55 kd TNF receptor-human TNFbeta complex: implications for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 K.; Naismith, J.H.; Sprang, S.R.
J. Mol. Biol. (1994) 239:332
Two crystal forms of the extracellular domain
necrosis factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #formal_name Homo sapiens #common_name man expressed in Escherichia coli, residue 11 is mutated as a result of the expression system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       stnfr1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #disulfide_bonds 
#disulfide_bonds 
#length 158 #molecular
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Banner, D.W.; D'Arcy, A.; Janes, W.; Gentz, R.;
H.J.; Broger, C.; Loetscher, H.; Lesslauer, W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Naismith, J.H.; Sprang, S.R. submitted to the Brookhaven Protein Data
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tumor necrosis factor receptor 55 kd extracellular domain
contains residues 12 172 of the mature receptor sequence
chain B - hu
                                                                                                                                 #length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A40737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rodseth, L.E.; Brandhuber, B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                         receptor activation.
                                                                                                                                                          #disulfide_bonds\
                                                                                                                                              #disulfide_bonds
                                                                                                                                 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       type i receptor
                                                                                                                                                                                                                                                                                                                             protein; cytokine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #molecular-weight 17827 #checksum
                                                                                                                             #molecular-weight 16046 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1222; DB 5;
Pred. No. 3.27e-258;
1; Mismatches 1;
                                                              Score 1119; DB 5;
Pred. No. 2.28e-233;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                         signalling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Devine, T.Q.;
                                                                                                                                                                                                                                                                                                                                                                                                          implications for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Indels
                                                                                              Length 142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 158
                                                                                                                                                                                                                                                                                                                         protein
                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bank,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eck, M.J.; Hale,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of type i tumor
                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     October
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Schoenfeld
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence.
                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ç
84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   met
                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
KEYWORDS
FEATURE
16-15
16-29
19-38
41-56
59-74
62-82
84-100
103-115
106-123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                           TITLE
                                                                     RESULT
ENTRY
                                                                                                                            Ş
                                                                                                                                                       밁
                                                                                                                                                                                Ş
                                                                                                                                                                                                             В
                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                      SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
#authors
  ALTERNATE_NAMES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #cross-references PDB:1TNR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #authors
                                                                                                                             146
                                                                                                                                         121 TVCTCHAGFFLRENECVSC 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TN034093

D'arcy, A.; Banne..
Loetscher, H.; Schoen..
Lesslauer, W.

J. Mol. Biol. (1993) 229:555
Crystallization and preliminary anvinf-beta-55 kd tnf receptor comyresolution: 2.85 angstroms
Determination: x-ray diffraction
Complex(lymphokineRECEPTOR)

"Aisulfide_bonds\
"cide_bonds\
"cide_bonds\"
                                                                                                                                                                                    86
                                                                                                                                                                                                              61
                                                                                                                                                                                                                                        26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                      1 CPQGKY1HPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSCS
                                                                                                                                                                                KCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  σ
                                                                                                                            TVCTCHAGFFLRENECVSC
                                                                                                                                                                                                                                        CPQGKYTHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSCS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NTVCTCHAGFFLRENECVSCSN 166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NTVCTCHAGFFLRENECVSCSN 142
                                                                                                                                                                                                                                                                                            h 50.5%;
Similarity 99.3%;
138; Conservative
tumor necrosis factor receptor 55 kd extracellular domain
contains residues 12 172 of the mature receptor sequence,
chain A - hu
stnfr1; type i receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Banner, D.W.; D'Arcy, A.; Janes, W.; Gentz, R
H.J.; Broger, C.; Loetscher, H.; Lesslauer,
Cell (1993) 73:431-445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Crystal structure of the soluble human 55 kd TNF receptor-human TNFbeta complex: implications for
                                                                      1NCFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Banner, D.W. submitted to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    recombinant form expressed in A52442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tumor necrosis factor receptor type 1 (P55 extracellular #formal_name Homo sapiens #common_name man
                                                                                                                                                                                                                                                                                                                                                    #length 139 #molecular-weight 15746 #checksum 5235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A4073
                                                                                                                                                                                                                                                                                                                                                                                        #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                              #disulfide_bonds\
#disulfide_bonds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A.; Banner, D.W.; Janes, W.; Winkler, I
cher, H.; Schoenfeld, H.J.; Zulauf, M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         to the Brookhaven Protein Data Bank, May 1994
                                                                     #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *type complete
                                                                                                                                                                                                                                                                                           Score 1103; DB 5;
Pred. No. 1.62e-229;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Baculovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; Gentz, R.; S
                                                                                                                                                                                                                                                                                                                      Length 139;
                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SF9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tnf-beta and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         for
                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Schoenfeld
                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                        85
                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₩
:
                                                                                                                                                                                                                                                                                               0
```

```
FEATURE 5-19
5-19
20-33
23-42
45-60
63-78
66-86
88-104
110-127
110-127
                                                                                             ACCESSIONS
REFERENCE
#authors
#journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
COMMENT
                                                                                                                                                                    TITLE
DATE
                                                                                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                         ENTRY
                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #journal
#title
        #accession PC4uy
##molecule_type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #cross-references PDB:1NCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #submission
                                                                        #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                authors
               1-461 ##label
##cross-references GB:U19994;
:cession PC4093
                                                                                                                                                                                                                                                      143
   ##residues
                                                                                                                                                                                                                                                                             122
                                                         ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                             Y Match 50.2%; Score 1096; DB 5; Local Similarity 99.3%; Pred. No. 7.85e-228;
                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                                              62
                                                                                                                                                                                                                                                                                                                                                     23
                                                                                                                                                                                                                                                                                                                                                                            Ŋ
                                                                                                                                                                                                                                                                                                                                                  KONTVCTCHAGFFLRENEC
                                                                                                                                                                                                                                                                             KONTYCTCHAGFFLRENEC 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       receptor activation.
Resolution: 2.25 angstroms
Determination: X-ray diffraction
R-value: no refinement
                                                                                        Suter, B.; Pauli, U.
Gene (1995) 163:263-266
Cloning of the CDNA encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A40737
Banner, D.W.; D'Arcy, A.; Janes, W.; Gentz, R.;
H.J.; Broger, C.; Loetscher, H.; Lesslauer, W.
Cell (1993) 73:431-445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rodseth, L.E.; Brandhuber, B.; Devine, T.Q.; Eck, K.; Naismith, J.H.; Sprang, S.R. J. Mol. Biol. (1994) 239:332
Two crystal forms of the extracellular domain of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          as a result of the expression system A66195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #formal_name Homo sapiens #common_name man
expressed in Escherichia coli, residue 11 is
                                                                        JC4302
                                                                                                                                                                 tumor necrosis factor receptor p55 - pigORGANISM 29-Nov-1995 #sequence_revision 08-Feb-1996 #text
                                                                                                                                                                                                       JC4302
                                                                                                                                                                                                                                                                                                                                                                                                                                                 #length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Crystal structure of the soluble human 55 kd TNF receptor-human TNFbeta complex: implications for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Naismith, J.H.; Sprang, S.R. submitted to the Brookhaven Protein Data
                                                                                                                                            JC430:
                                                                                                                                 JC4302
                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 necrosis factor receptor.
                                                                                  factor receptor
                                                                                                                                                      12-Dec-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
 protein
1-7 ##label SU2
                                                                                                                                                                                                                                                                                                                                                                                                                                                            #disulfide_bonds\
#disulfide_bonds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
                                                                                                                                            2; PC4093
                                                                                                                                                                                                                                                                                                                                                                                                                                                 140 #molecular-weight 15889 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein; cytokine; signalling protein
                                                                                                                                                                                                     #type complete
                                SUT
NID:g1141752;
                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                             the
                                   PID:g1141753
                                                                                             porcine
                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                        Length 140;
                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bank,
                                                                                             p55 tumor necrosis
                                                                                                                                                                 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eck, M.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mutated to met
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        for
                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  October
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Schoenfeld
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           type i tumor
                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hale
                                                                                                                                                                            #formal_name
                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
FEATURE
1-29
30-461
                     δÃ
                                                                                                                                                                                         GENETICS
                                                                                                                                                                                                                                                                                                                                     ACCESSIONS
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
В
                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENETICS
                                                                                                                                                                                                                                                                                                                                                                            DATE
                                                                                                                    SUMMARY
                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                               ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      44-82
211-231
361-447
                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                       #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      44-194
                                                                                                                                                                 #introns
                                                                                                                                                                            #gene
                                                                                                                                                                                                                                                                                                                           #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                            143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23
```

```
CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION
                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                54,145,151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #cross-references MUID:93156721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ##experimental_source kidney cell line
101 SCKTCRKEMSQVEISPCQADKDTVCGCKENQFQRYLSETHFQCVDCSPCFNGTVTIPCKE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ##residues 1-454 ##label
##cross-references GB:M76656;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ##molecule_type DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ##status
                                                                     41 ESICPQGKYSHPQNRSICCTKCHKGTYLHNDCLGPGLDTDCRECDNGTFTASENHLTQCL 100
                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                    ch 43.2%;
l Similarity 67.4%;
l16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 46.4%;
Similarity 71.9%;
                                                                                                                                                                                                                                                                                                                                                           13/3; 65/1; 108/1; 158/1; 184/2; 210/1; 248/1; 257/3; 353/1 superfamily tumor necrosis factor receptor type 1; NGF receptor repeat homology cytokine receptor cytokine receptor superfamily factor receptor superfamily superf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mol. Immunol. (1993) 30:165-176
Genomic organization and promoter function of
tumor necrosis factor receptor beta gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #superfamily tumor necrosis factor receptor type 1; NGF
receptor repeat homology
glycoprotein; kidney; receptor; transmembrane protein; tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tnfr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         157826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rothe, J.G.; Bl
Steinmetz, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tumor necrosis factor receptor 02-Aug-1996 #sequence_revision 23-May-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #length 461 #molecular-weight 50696 #checksum 8079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    I57826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #label EXT\
#domain NGF receptor repeat homology #label NG1\
#domain transmembrane #status predicted #label TMM\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #binding_site carbohydrate (Asn) (covalent) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #domain signal sequence #status predicted #label SIG\
#product tumor necrosis factor receptor p55 #status
predicted #label MAT\
#domain extracellular cysteine rich #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              preliminary; translated from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #domain signal transduction #status predicted #label
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bluethmann, H.; Gentz,
                                                                                                                                                                                                                    Score 944; DB 2;
Pred. No. 2.33e-19
28; Mismatches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1012; DB 2; 1
Pred. No. 1.20e-207;
25; Mismatches 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RES
NID:g202100; PID:g202102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            - mouseORGANISM
02-Aug-1996 #te:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                              Length 454;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 æ
::
                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lesslauer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the
                                                                                                                                                                                                                            ۳,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #formal_name
                                                                                                                                                                                                                            سر
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    !
```

```
ACCESSIONS
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ş
                       COMMENT
                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #authors Lewis, M.; Tartaglia, L.A.; Lee, A.; Bennett, G.L.; Rice, G.C.; Wong, G.H.W.; Chen, E.Y.; Goeddel, D.V.
#journal Proc. Natl. Acad. Sci. U.S.A. (1991) 88:2830-2834
Cloning and expression of cDNAs for two distinct murine tumor necrosis factor receptors demonstrate one receptor is species specific.

#cross-references MUID:91187885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #authors Goodwin, R.G.; Anderson, D.; Jerzy, R.; Davis, T.; Brann C.I.; Copeland, N.G.; Jenkins, N.A.; Smith, C.A. #journal Mol. Cell. Biol. (1991) 11:3020-3026 #title Molecular cloning and expression of the type 1 and type murine receptors for tumor necrosis factor.
                                                                                                                                #journal Immunogenetics (1994) 39:450-451
#title Nucleotide sequence of the TNF ty
endothelioma cell line.
#cross-references MUID:94245292
                                                                                                                                                                                                                                                                                                            *accession
                                                                                                                                                                                                                                                                                                                              type b. #cross-references MUID:92039815
                                                                                                                                                                                                                                                                                                                                                                      #title
                                                                                                                                                                                                                                                                                                                                                                                          #journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *cross-references MUID: 91285014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *accession
                                                                                                                      #accession
                                                                                                                                                                                                                                                                                                                                                                                                          authors
                                                                                                                                                                                                                 authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ##residues 1-454 ##label GO2 ##cross-references GB:M60468; NID:g199825; PID:g199826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      161
                                                                                                                                                                                                                                                   ##molecule_type mRNA
#residues 1-454 ##label ROT
##cross-references EMBL:X57796; N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ##residues 1-454 ##label LEW ##cross-references GB:M60468; NID:g199825; PID:g199826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ##molecule_type mRNA
##residues 1 - 454 ##label RES
##cross-references GB:L26349; NID:g430732; PID:g430733
This protein is one of two distantly related receptors
TNF-alpha (cachectin) and TNF-beta (lymphotoxin).
                                                                                                  ##Status
                                                                                                                                                                                                                                                                                                                                                                                                                                               ##cross-references EMBL:X59238; NID:g53578; PID:g53579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ##residues
                                                                           **molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KONTVCTCHAGFFLRENECVSCSNCKKSLECTKLSLPQ-IENVKGTEDSGTT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TQNTYCNCHAGFFLRESECVPCSHCKKNEECMKLCLPPPLANYTNPQDSGTA 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Barrett, K.; Taylor-Fishwick, D.A.; Cope, A.P.; Kissonerghis, A.M.; Gray, P.W.; Feldmann, M.; Foxwell, B.M.J.

Bur J. Immunol. (1991) 21:1649-1656

Cloning, expression and cross-linking analysis of the murine p55 tumor necrosis factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tumor necrosis factor receptor type 1 precursor - mouseALTERNATE_NAMES #formal_name Mus musculus #common_name house mouse 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 05-Sep-1997
                                                                                                                                                                                                                                                                                                              S19021
                                                                                                                                                                                                                                                                                                                                                                                        Rothe, J.G.; Brockhaus, M.; Gentz, R.; Lesslauer, Immunogenetics (1991) 34:338-340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S16677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B40254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A38634
                                                                                                                    I54532
                                                                                                                                                                                                             Bebo, B.F.
                                                                                                                                                                                                                                                                                                                                                                  Molecular cloning and expression of the mouse Inf receptor
                                                                                                                                                                                                                                                                                                                                                                                                                               S19021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A40254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A38634; B40254; S16677; S19021; I54532
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1-454 ##label BAR
                                                                                                 translated from GB/EMBL/DDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *type complete
                                                                                                                                                                                                                                                   NID:g54848; PID:g54849
                                                                                                                                                                          type
                                                                                                                                                                          Н
                                                                                                                                                                          receptor from a mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T.; Brannan,
C.A.
                                                                                                                                                                                                                                                                                                                                                                                                          ε
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSIONS
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                           FEATURE
                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                     CLASSIFICATION
                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44-82
84-126
127-167
168-204
213-235
236-454
44-82
84-126
127-167
168-204
212-234
                                                                                                                                                                                                                                                                                                                                                                                                                                                               #journal #title
                                                                                                                30-211
30-201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       54,151,202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-454
                                                                                                                                                                        30-461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #length
```

```
CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 43.2%;
Best Local Similarity 67.4%;
Matches 116; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #cross-references MUID:91090841
#accession B36555
                                                                                                                                                                                                                                                                                                                                                                                                                                 ##residues 1-461 ##label HIM
##cross-references GB:M6312; NID:g207361; PID:g207362
This protein is one of two known receptors for both TNF-alpha
(cachectin) and TNF-beta (lymphotoxin).

IFICATION #superfamily tumor necrosis factor receptor type 1; NGF
receptor repeat homology
duplication; glycoprotein; receptor; transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      161 TONTYCHCAGFFLRESECVPCSHCKKNEECMKLCLPPPLANVTNPQDSGTA 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101 SCKTCRKEMSQVEISPCQADKDTVCGCKENQFQRYLSETHFQCVDCSPCFNGTVTIPCKE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41 DSLCPQGKYVHSKNNSICCTKCHKGTYLVSDCPSPGRDTVCRECEKGTFTASQNYLRQCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLSLPQ-IENVKGTEDSGTT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCTLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *superfamily tumor necrosis factor receptor type 1; NGF receptor repeat homology duplication; glycoprotein; receptor; transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Himmler, A.; Maurer-Pogy, I.; Kroenke, M.; Scheurich, P. Filzenmaier, K.; Lantz, M.; Olsson, I.; Hauptmann, R.; Stratowa, C.; Adolf, G.R.
DNA Cell Biol. (1990) 9:705-715
DNA cell Biol. (1990) 9:705-715
Molecular cloning and expression of human and rat tumor necrosis factor receptor chain (p60) and its soluble derivative, tumor necrosis factor-binding protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tumor necrosis factor receptor type 1 precursor - ratCONTAINS #formal_name Rattus norvegicus #common_name Norway rat 30-Jun-1992 #sequence_revision 07-Oct-1994 #text_change 05-Sep-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #domain extracellular #status predicted #label EXT\
#domain NGF receptor repeat homology #label NGI\
#domain transmembrane #status predicted #label NEM\
#domain intracellular #status predicted #label INT\
#domain extracellular #status predicted #label EXT\
#product tumor necrosis factor binding protein #state
predicted #label TBP\
#domain NGF receptor repeat homology #label NG2\
#domain NGF receptor repeat homology #label NG3\
#domain NGF receptor repeat homology #label NG3\
#domain NGF receptor repeat homology #label NG4\
#domain NGF receptor repeat homology #label NG4\
                                                                                                                                                                                                                                                                                 #domain signal sequence #status predicted #label SIG\
#product tumor necrosis factor receptor type 1 #statu
predicted #label MAT\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #Commain signal sequence #status predicted #label SIG\
#product tumor necrosis factor receptor type 1 #statu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #binding_site carbohydrate (Asn) (covalent) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  predicted *label MAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #molecular-weight 50129 #checksum 4839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 944; DB 1; L
Pred. No. 2.33e-191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 454;
                                                                                                                                                                                                    binding protein #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  type 1 #status
                                                                                                                                                                                                                                                                                                                             1 #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ۲,
```

transmembrane #status predicted #label MEM

of the

Ryan,

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
      REFERENCE
#authors
                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #journal #title
                                                                                                                                                                                                                                                                                                                      #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          235-461
54,151,201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                #authors Fiddes, J.C.; Goodman, H.M.
#journal J. Mol. Appl. Genet. (1981) 1:3-18
#title The gene encoding the common alpha
#cross-references MUID:82267643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #cross-references MUID:80011660
                                                                                                                                                                                                                                                                                                    #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                 #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #accession
                                                                                                                                                                                                                                     #accession
                                                                                                                                                                                                                                                         *cross-references MUID:81117268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ##molecule_type mRNA
#residues 1-116 ##label FID
##cross-references GB:V00518; NID:g31868; PID:g31869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101
                                                                                        ##note
                                                                                                                                                                                        ##molecule_type protein
##residues 1-24 ##label BIR
                                                                                                                                                                                                                                                                                                                                                                                  ##cross-references GB:V00484
                                                                                                                                                                                                                                                                                                                                                                                                          ##residues
                                                                                                                                                                                                                                                                                                                                                                                                                     ##molecule_type DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41 DNLCPQGKYAHPKNNSICCTKCHKGTYLVSDCPSPGQETVCEVCDKGTFTASQNHVRQCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KONTYCNCHAGFFLSGNECTPCSHCKKNQECMKLCLPPVANVTNPQDSGTA 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          h 42.5%;
Similarity 66.1%;
113; Conservative
    A90751
Sairam,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A33213
Fiddes, J.C.; Goodman, H.M.
Nature (1979) 281:351-356
Isolation, cloning and sequence analysis of the alpha-subunit of human chorionic gonadotropin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              glycoprotein hormones alpha chain precursor - humanALTERNATE_NAMES
alpha chain; follitropin alpha chain; interstitial
cell-stimulating hormone alpha chain; luteinizing hormone
alpha chain; lutropin alpha chain; thyroid-stimulating
hormone alpha chain; thyrotropin alpha chain
formal_name Homo sapiens #common_name man
13-Jul-1981 #sequence_revision 23-Oct-1981 #text_change
                                                                                                                                                                                                                                                                      Birken, S.; Fetherston, J.; Canfield, R.; Boime, I. J. Biol. Chem. (1981) 256:1816-1823
The amino acid sequences of the prepeptides contained in alpha and beta subunits of human choriogonadotropin.
                                                                                                                                                                                                                                     в92303
                                                                                                                                                                                                                                                                                                                                                                                                                                                 A92832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A92832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A93213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A93213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A94552; B92181; A92141; I58200;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-Sep-1997
                                         restriction endonuclease evidence indicates that a single gene codes for the alpha chain common to the four dimeric hormones: thyrotropin, lutropin, follitropin, and choriogonadotropin previously the mature alpha chain (residues 25-116) was isolated from each of the hormones and its sequence was determined, as documented below
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #domain intracellular #status predicted #label INT\
#binding_site carbohydrate (Asn) (covalent) #status
predicted
                                                                                                                                                                                                                                                                                                                                                                                                      1-98 ##label
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A92832; B92303; A90751; A90179; A91461; A92184;
2; B92181; A92141; I58200; A01481
      M.R.; L1, C.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             461 #molecular-weight 50969 #checksum 1617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred.
26; N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 928; DB 1; L
Pred. No. 1.56e-187;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          subunit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cDNA for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          four
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              c)c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                  REFERENCE
                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #journal #title
                                                                                                                                                                                                           #authors
#journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #authors Rathnam, P.; Saxena, B.B.
#journal J. Biol. Chem. (1975) 250:6735-6746
#title Primary amino acid sequence of follicle-stimulating hormone
from human pituitary glands.
#cross-references MUID:76005558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #journal #title
                                                                                                 alpha-subunit of human luteinizing hormone (hLHalpha).
#cross-references MUID:74262937
#contents annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #authors Sairam, M.R.; Papkoff, H.; L1, C.H.
#journal Biochem. Biophys. Res. Commun. (1972) 48:530-537
#title Human pituitary interstitial cell stimulating hormone:
    primary structure of the alpha subunit.
#cross-references_MUID:72242988
                                                                                                                                                                                                                                                                                                                                                      #authors Bellisario, R.; Carlsen, R.B.; Bahl, #journal J. Biol. Chem. (1973) 248:6796-6809 #title Human chorionic gonadotropin. Linear the alpha subunit.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #submission #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #cross-references MUID:77243687 #accession A90751
                                             #journal
                                                                                                                                                                                                                                                                                                                                         #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #cross-references MUID:75211304
#accession B92181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #authors
                                                                 #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ##molecule_type protein
##residues 28-107,'SC',110-116 ##label SA2
                                                                                                                                                                                                                                                                                            ##molecule_type protein
##residues 25-116 ##label BEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ##residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ##molecule_type protein
##residues 28-116 ##label SHO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ##molecule_type protein
##residues ____25-28,'E',30-116 ##label
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ##molecule_type protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ##molecule_type protein
##residues 28-107,'SC',110-116 ##label SAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ##note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ##molecule_type protein
##residues 25-116 ##label MOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ##residues
                                                                                                     A92760

Shome, B.; Parlow, A.F.

J. Clin. Endocrinol. Metab. (1974) 39:199-202

Human follicle stimulating hormone (hFSH): first proposal for the amino acid sequence of the alpha-subunit (hFSHalpha) and first demonstration of its identity with the aminotation of human luteinizing hormone (hLHalpha).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            submitted to the Atlas, A94552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Morgan, F.J.; Birken, S.; Canfield, R.E. J. Biol. Chem. (1975) 250:5247-5258
The amino acid sequence of human chorion alpha subunit and beta subunit.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Keutmann, H.T.; Williams, R.M.; Bishop, W.H.; Fed. Proc. (1978) 37:1828
Structure of human luteninizing hormone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Can. J. Biochem. (1977) 55:79
Human pituitary thyrotropin.
alpha and beta subunits.
                   Fujiki, Y.; Rathnam, P.; Saxena, B.B. Biochim. Biophys. Acta (1980) 624:428-435 Studies on the disulfide bonds in human p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A92181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A94552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A90179
                                                                                                                                                                                                                                                                                                                                         A92141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A92184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A91461
                                                                 Fujiki, Y.; Rathnam,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A91461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A90179
follicle-stimulating hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     heterogeneity is found at the 10 and 30% of the chains lac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-116 ##label KEU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                respectively
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1977) 55:755-760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      April 1975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The primary structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the amino end. lack residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       chorionic
```

amino

acid sequence

of.

Approximately 1-2 and 1-3,

gonadotropin.

pituitary

```
REFERENCE
#authors
#submission
                                                                                          #journal
#title
REFERENCE
                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                    ş
                                                                                                                                                                                                                                                                                                                                                                                                 용
                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE
1-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #cross-references MUID:81021713
#contents annotation; prelinerance A44674
    COMMENT
                                                                                                                                                                  #cross-references PDB:1HRP
REFERENCE TN022062
#authors Lapthorn, A.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #journal #title
                                #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31-55,34-84,52-106,
56-108,83-111
76,102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #gene GDB:CGA
##cross-references GDB:119774; OMIM:118850
#map_position 6q14-6q21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #authors
                                                                            #authors
                                                                                                                                                                                                                                                             #note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #introns
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *cross-references
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *contents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               authors
                                                                                                                                                                                                                                                                                                                                                                                                                              193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ##status preliminary; translated from GB/EMBL/D
##molecule_type DNA
##residues 1-116 ##label RES
##cross-references GB:S70585; NID:g546844; PID:g546845
                                                                                                                                                                                                                                                                                                                                                                    253 CVAKSYNRVTVMGGFKVENHTACHCSTCYYHKS 285
                                                                                                                                                                                                                                                                                                                                                                                  84 CVAKSYNRVTVMGGFKVENHTACHCSTCYYHKS 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                          24
                                                                                                                                                                                                                                                                                                                        12
                                                                                                                                                                                                                                                                                                                                                                                                                       Resolution:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    h 30.8%;
Similarity 93.5%;
87; Conservative
                                                                                         Nature (1994) 369:455
Crystal structure of human chorionic gonadotropin.
TN022063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *superfamily glycoprotein hormones alpha chain glycoprotein; heterodimer; hormone; pituitary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Miyoshi, I.; Kasai, N.; Hayashizaki, Y.
Nippon Rinsho (1994) 52:940-947
[Structure and regulation of human thyroid-stimulating
                          J. Biol. Chem. (1989) 264:6705
Preliminary x-ray diffraction analysis of human chorionic
                                                                                                                                                  Lapthorn, A.J.; Harris, D.C.; Littlejohn, A.; J.W.; Canfield, R.E.; Machin, K.J.; Morgan,
                                                                                                                                                                                                              Lapthorn, A.J.; Harris, D.C. submitted to the Brookhaven
                                                                                                                                                                                                                                               placental origin, urinary extracted A52806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       I58200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nature (1994) 369:455-461
Crystal structure of human chorionic gonadotropin.
annotation; X-ray crystallography, 3.0 angstroms;
of disulfide bonds
                                                                                                                                                                                                                                                                         chorionic gonadotropin, chain A - humanORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30/1; 91/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lapthorn, A.J.; Harris, D.C.; Littlejohn, A.; Lustbader, J.W.; Canfield, R.E.; Machin, K.J.; Morgan, F.J.; Isaacs,
                                                                           Harris, D.C.; Machin, K.J.; Evin, G.M.;
                                                                                                                                                                                                                                                                                                          1HRPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             annotation; preliminary disulfide bonds
               gonadotropin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hormone (TSH)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MUID:94254248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #disulfide_bonds #status experimental\
*binding_site carbohydrate (Asn) (cova
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #domain signal sequence #status experimental #labe #product glycoprotein hormones alpha chain #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         experimental #label MAT\
                                                                                                                                                                                                                                                                                                       *type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #molecular-weight 13075 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 672; DB 1; Length 116; Pred. No. 8.42e-127; 1; Mismatches 5; Indels
                                                                                                                                                                                                              .; Isaacs, N.W.
Protein Data Bank, August 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (covalent) #status
                                                                         Morgan, F.J.; Isaacs,
                                                                                                                                                  Lustbader, F.J.; Isaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #label
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         correction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                        #formal_name
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIG\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
KEYWORDS
FEATURE
4-28
7-57
25-79
                                                                                                                                                                                                                                                                                                       FEATURE
37-41
                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENTRY
                          Ωy
                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
밁
                                                                                                                                                  SUMMARY
                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #cross-referen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUMMARY
                                                                                       Query Match
Best Local S
Matches 8
                                                                                                                                                                                                                            7-10,22-25
49-53,26-34
61-65,71-75
55-60,77-81
3-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                           #journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #journal
#title
                                                                                                                                                                  24-78
28-80
55-83
                                                                                                                                                                                                            6-56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                       #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #authors
                             200
63
                                                         w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13
RVTVMGGFKVENHTACHCSTCYY 85
                                                                                                                                                 #length 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TN032624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #length 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hormone
```

```
257 SYNRVTVMGGFKVENHTACHCSTCYY 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 SYNRVTVMGGFKVENHTACHCSTCYY
                       CPECTIQENPEFSQPGAPIIQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSYN 62
CPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSYN 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Resolution: not applicable
Determination: theoretical model
complex; glycoprotein hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Determination: X-ray diffraction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29.8%;
Similarity 96.5%;
83; Conservation
                                                                                                          29.7%;
Similarity 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wu, H.; Lustbader, J.W.; Liu, Y.; Canfield, R.E.; Hendrickson, W.A.
Structure (London) (1994) 2:545
Structure of human chorionic gonadotropin at 2.6 a resolution from mad analysis of the selenomethionyl protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jiang, X.; Dreano, M.; Buckler, D.R.; Cheng, S.; Yth. Wu, H.; Hendrickson, W.A.; El Tayar, N. Structure (London) (1996) 3:1341 Structural predictions for the ligand-binding region glycoprotein hormone receptors and the nature of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Jiang, X.; Dreano, M.; Buckler, D.R.; Cheng, S.; Ythier, A.; Wu, H.; Hendrickson, W.A.; El Tayar, N. submitted to the Brookhaven Protein Data Bank, December 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ces PDB:1XUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #formal_name Homo sapiens #common_name man
A66957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 chorionic gonadotropin, chain A - humanPDB_TITLE receptor complexed with human chorionic gonado
                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                     phosphorylation; receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hormone-receptor interactions structure
                                                                                                                                                                                                                                                              #region beta sheet\
#region beta sheet\
#region beta sheet\
#region beta sheet\
#disulfide_bonds\
#disulfide_bonds\
                                                                                                                                                                                             #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #disulfide_bonds\
#disulfide_bonds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                  #region beta sheet\
                                                                                                                                                                                                                                                                                                                                                                                                      #region helix (right hand alpha)\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #disulfide_bonds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #molecular-weight
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #type complete
                                                                                                                                                                           #molecular-weight 9471
                                                                                   Score 648; DB 5; L
Pred. No. 3.63e-121;
0; Mismatches 0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 650; DB 5; Le
Pred. No. 1.23e-121;
1; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       receptor glycoprotein; hormone;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9572 #checksum 1371
                                                                                                                                 Length 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 86;
                                                                                                                                                                               #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gonadotropin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S.; Ythier,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    theoretical
                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

Š

260 RVTVMGGFKVENHTACHCSTCYY 282

```
ACCESSIONS
REFERENCE
#authors
#journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
ENTRY
                                                                                                                                                                                                                                                                                                                TITLE
DATE
                                                                                                                                                                                                                                                                                                                                                                  RESULT
ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #submission submitted to
#cross-references PDB:1HCN
REFERENCE TN020262
#authors Wu, H.; Lustb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                     SUMMARY
                                                                                                  CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 8
 Query Match 25.3%;
Best Local Similarity 83.5%;
Matches 71; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-78
28-80
55-83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #journal
#title
                                                                                                                                                             **ERENCE A39555

**Fauthors Golos, T.G.; Durning, M.; Fisher, J.M.

**Journal DNA Cell Biol. (1991) 10:367-380

**Itile Molecular cloning of the rhesus glycoprotein hormone alpha-subunit gene.

**Cross-references MUID:91321740

**accession A39555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-35,48-54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4-11,21-28
                                                                                                            ##molecule_type DNA ##residues 1-120 ##labol ^^*
                                                                                                                                                                                                                                                                                                                                                                                                                             7 Match 29.7%; Score 648; DB 5; La Local Similarity 100.0%; Pred. No. 3.63e-121; Les 83; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                                                                                                                                                                                                                                                 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein.
Resolution: 2.6 angstroms
Determination: X-ray diffraction
                                                            1-120 ##label GOL

*superfamily glycoprotein hormones alpha chain

glycoprotein

#length 120 #molecular-weight 13785 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hendrickson, W.A.

Structure (1994) 2:545

Structure of human chorionic gonadotropin at 2.6 angstroms resolution from mad analysis of the selenomethionyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            submitted to the Brookhaven Protein Data Bank, July 1994
                                                                                                                                                                                                                                                                                A39555
                                                                                                                                                                                                                                                                                          glycoprotein hormones alpha chain precursor - rhesus macaqueORGANISM 08-Nov-1991 #sequence_revision 08-Nov-1991 #text_change 13-Jan-1995
                                                                                                                                                                                                                                                                                                                                                                A39555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #length 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wu, H.; Lustbader, J.W.; Liu, Y.; Canfield, R.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wu, H.; Lustbader, J.W.; Liu, Y.; Canfield, R.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human chorionic gonadotropin, chain A - humanORGANISM A52587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1HCNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hendrickson, W.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #disulfide_bonds\
#disulfide_bonds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #region helix (right hand alpha)\
#region beta sheet\
#region beta sheet\
#region bota sheet\
#disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                              #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #molecular-weight 9471 #checksum
Score 552; DB 2; Length 120;
Pred. No. 8.95e-99;
4; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                  5074
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #formal
```

밁

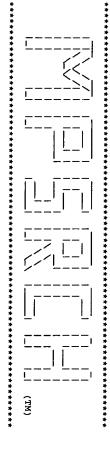
35 CPECKPRENKFFSKPGAPIYQCMGCCFSRAYPTPVRSKKTMLVQKNVTSESTCCVAKSLT 94

Search completed: Wed May 6 09:01:17 1998 Job time: 34 secs.

Š

260 RYTYMGGFKVENHTACHCSTCYYHK 284

(OT92U) AMAZE SUAR SIHT



Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm Run on: Wed May 6 08:58:14 1998; MasPar time 8.40 Seconds 851.426 Million cell updates/sec

Tabular output not generated.

Title: >US-08-804-166-6

Description: (1-285) from US08804166.pep

Perfect Score: 2183

Description: (1-285) from US08804166.pep
Perfect Score: 2183
Sequence: 1 SRTSLLLAFGLLCLPWLQEG......GFKVENHTACHCSTCYYHKS 285

Scoring table: PAM 150
Gap 11

Searched: 69112 segs, 25083644 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database: swiss-prot35 1:swiss1

Statistics: Mean 42.622; Variance 62.749; scale 0.679

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

22222118 22222128 22222128 22222128	Result
1012 944 924 672 549 549 549 540 540 542 542 543 543 543 543 543 543 543 543 543 543	Score
222224444444555538552466	o i ch
1116 120 120 120 120 120 120 120 120 120 120	1
بر مر	BB
TWR1_PIG TWR1_PIG GLHA_HOVAN GLHA_RABITI GLHA_RABITI GLHA_SHEEP GLHA_BALAC GLHA_MOUSE GLHA_MOUSE GLHA_PIGCA GLHA_PIGCA GLHA_PICCA GLHA_PIGCA GLHA_CALJA GLHA_EQUISA GLHA_COLJA GLHA_EQUISA GLHA_COLJA	ID
TUMOR NECROSIS FACTOR GLYCOPROTEIN HORMONES	iption
1.63e-24 8.75e-125 8.75e-121 3.55e-116 3.70e-116 8.47e-115 2.44e-115 2.44e-115 2.44e-113 1.98e-113	

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	4.7
183	191	204	212	212	211	214	216	221	225	245	247	376	424	427	448	450	474	479	478	500	000
8.4	8.7	9.3	9.7	9.7	9.7	9.8			10.3		11.3		19.4		20.5		21.7	21.9	21.9	22.9	22.9
595	323	260	474	427	425	349	415	326	325	435	417	125	117	94	108	114	117	97	93	118	TTO
ш	<b>_</b>	۳	۳	<u>د</u>	H	۲	۳	Н	Н	μ	-	Н	_	Н	Н	Ъ	щ	4سر	٢	٢	٢
CD30_HUMAN	FASA_BOVIN	CD27_HUMAN	TNR2_MOUSE	NGFR_HUMAN	NGFR_RAT	VC22_VARV	TNRC_MOUSE	VT2_MYXVL	VT2_SFVKA	TNRC_HUMAN	WSL1_HUMAN	GLHA_FUNHE	GLHA_ACALA	GLHA_THUOB	GLH1_ONCKE	GLH2_ONCKE	GLHA_ANGAN	GLHA_RANCA	GLHA_MURCI	GLHA_CTEID	POSTO TRUE
CD30L RECEPTOR PRECURS	FASL RECEPTOR PRECURSO	CD27L RECEPTOR PRECURS	TUMOR NECROSIS FACTOR	LOW-AFFINITY NERVE GRO	LOW-AFFINITY NERVE GRO	PROTEIN C22/B28 HOMOLO	LYMPHOTOXIN-BETA RECEP	TUMOR NECROSIS FACTOR	TUMOR NECROSIS FACTOR	LYMPHOTOXIN-BETA RECEP	WSL-1 PROTEIN PRECURSO	GLYCOPROTEIN HORMONES	GLICOPROTEIN HORMONES								
1.24e-20	1.77e-22	1.61e-25	2.04e-27	2.04e-27	3.53e-27	6.80e-28	2.26e-28	1.43e-29	1.55e-30	2.07e-35	6.68e-36	6.97e-69	1.37e-81	2.17e-82	5.27e-88	1.53e-88	5.42e-95	2.43e-96	4.53e-96	5.13e-102	S.IJe-IUZ

## ALIGNMENTS

RESULT ID T
SULT 1 INRI_HUMAN STANDARD; PRT; 455 AA. P10438.

```
CC INFRAPPA B SIGNALING: TYPE I MEMBRANE PROTEIN.

CC II- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN.

CC II- SIMILARITY: CONTAINS A LA-NGFR/TNFR-TYPE CYSTEINE-RICH REGION.

DR EMBL; X55313; G37224; -.

DR EMBL; M53294; G339754; -.

DR EMBL; M75866; G339756; -.

DR EMBL; M75866; G339750; JOINED.

DR EMBL; M75864; G339750; JOINED.

DR EMBL; M75864; G339750; JOINED.

DR EMBL; M63121; G339750; JOINED.

DR EMBL; M63126; G339750; JOINED.

DR EMBL; M75864; G339750; JOINED.

DR EMBL; M5865; G339750; JOINED.

DR EMBL; M50865; G339750; JOINED.

DR EMBL; M50865; G339750; JOINED.

DR EMBL; M50865; G339750; JOINED.

DR EMBL; M75864; G339750; JOINED.

DR EMBL; M60275; G339760; -.

DR EMBL; M75864; G339750; JOINED.

DR EMBL; M75865; G339750; JOINED.

DR EMBL; M75865; G339750; JOINED.

DR EMBL; M75865; G339750; JOINED.

D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AN MEDLINE: 97094982.

AN ANAISMITH J.H., DEVINE T.O., KHONO H., SPRANG S.R.;

AN ANAISMITH J.H., DEVINE T.O., KHONO H., SPRANG S.R.;

AN ANAISMITH J.H., DEVINE T.O., KHONO H., SPRANG S.R.;

AN ANAISMITH J.H., DEVINE T.O., KHONO H., SPRANG S.R.;

AN ANAISMITH J.H., DEVINE T.O., KHONO H., SPRANG S.R.;

AN ANAISMITH J.H., DEVINE T.O., KHONO H., SPRANG S.R.;

C. FUNCTION: RECEPTOR FOR THE ACTIVATION WHICH INITIATES THE SERVICE CASPASE B PROTEDLYTIC ACTIVATION WHICH INITIATES THE COMPLEX BY MEDIANING APOPTOSIS.

C. PROTEASES) MEDIANING APOPTOSIS.

C. SUBBUNIT: THE BINDING TO THE EXTRACELLULAR DOMAIN OF THERI LEADS TO HOMOTRIMERIZATION. ONCE AGGREGATED THE RECEPTORS DEATH DOMAINS TO COMPLEX BY THEIR ASSOCIATION WITH TERACTING SPECIFICALLY PROTEINS SUCH AS TRAFS, RIP AND POSSIBLY FADD, ARE RECRUITED TO THEIR COMPLEX BY THEIR ASSOCIATION WITH TRADD. THIS COMPLEX ACTIVATES AT LEAST TWO DISTINCT SIGNALING CASCADES, APOPTOSIS AND THE FARDS APOPTOSIS APOPTOSIS AND THE FARDS APOPTOSIS APOPTOSI
                                                                                                                                                                                                                                                CHAIN
CHAIN
DOMAIN
TRANSMEM
DOMAIN
DOMAIN
REPEAT
DOMAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                          REPEAT
REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE; 93258809.

BANNER D.W., D'ARCY A., JANES W., GENTZ R., SCHOENFELD BROGER C., LOETSCHER H., LESSLAUER W.;

CELL 73:431-445(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENOMICS
[7]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS00652; TNFR_NGFR_1; 3.
PROSITE; PS50050; TNFR_NGFR_2; 3.
PROSITE; PS50017; DEATH_DOMAIN; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  X-RAY CRYSTALLOGRAPHY (1.85 ANGSTROMS) OF 41-202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       X-RAY CRYSTALLOGRAPHY (2.85 ANGSTROMS) OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J. BIOL. CHEM. 265:1531-1536(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 41-45.
MEDLINE; 90110215.
                                                                                                                                                                                                                                                                                                                                                                                                                                     SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13:219-224(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TRANSMEMBRANE;
  GLYCOPROTEIN; REPEAT;
                                                                                                                                               TNFR-CYS 1.
TNFR-CYS 2.
TNFR-CYS 3.
TNFR-CYS 4.
DEATH DOMAIN.
                                                                                                                                                                                                                                                                                               TUMOR NECROSIS FACTOR RECEPTOR 1.
TUMOR NECROSIS FACTOR BINDING PROTEIN 1.
EXTRACELULAR (POTENTIAL).
POTENTIAL.
CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIGNAL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APOPTOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        H. -J.,
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RX MEDLINE; 96011645.

RX SUTER B., PAULI U.H.;

RI GENE 153:263-266(1995).

CI -!- FUNCTION: RECEPTOR FOR THE ACIVATED RECEPTOR. THE RESULTING COMPLEX (DISC)

CC RECRUITS CASPASE-B TO THE DETINITION GRAPHER (CISC)

CC RECRUITS CASPASE-B PROTECLYTIC ACTIVATION WHICH INITIATES THE CONTENSES; ASPARTATE-SPECIFIC CYSTEINE PROTEASES; MEDIATING APPOTOSIS (BY SIMILARITY).

CC PROTEASES) MEDIATING APPOTOSIS (BY SIMILARITY).

CC PROTEASES) MEDIATING APPOTOSIS (BY SIMILARITY).

CC PROTEINS THE SINDING TO THE EXTRACELLULAR DOMAIN OF THEIL LEADS TO HOMOTRIMERIZATION. ONCE AGGREGATED THE RECEPTORS DEATH DOMAINS OF TRADD. VARIOUS TRADD-INTERACTING PROTEINS SUCH AS TRAFS, RIP AND POSSIBLY FADD, ARE RECRUITED TO THEIR THE DEATH DOMAIN OF TRADD. VARIOUS TRADD, ARE RECRUITED TO THEIR SUCH AS TRAFS, RIP AND POSSIBLY FADD, ARE RECRUITED TO THEIR COMPLEX BY THEIR ASSOCIATION WHITH TRADD. THIS COMPLEX CONTAINS A LANGUARY SIGNALING CASCADES, APOPTOSIS AND POSSIBLY FADDAL ARE RECRUITED TO THE SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN.

CC INTERLECTION OF THE SUBCELLULARITY: CONTAINS A LA-NGFR/THER-TYPE CYSTEINE-RECRUITED TO SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 16
                                                                                     -1- SUB-LI-
-1- SIMILARITY: CUMPARITY: CUMPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-OCT-1996
01-OCT-1996
01-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
      PROSITE; I
PROSITE; I
RECEPTOR;
SIGNAL
CHAIN
DOMAIN
TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TNFR1.
SUS SCROFA (PIG).
FUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TNR1_PIG P50555;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TUMOR NECROSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-KIDNEY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            161 KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYMSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KONTVCTCHAGFFLRENECVSCSNCKKSLECTKLSLPQIENVKGTEDSGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCTLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (REL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EL. 34, CREATED)
EL. 34, LAST SQUENCE UPDATE)
EL. 35, LAST ANOTATION UPDATE)
FACTOR RECEPTOR 1 PRECURSOR (P60) (INF-R1) (P55).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               143
158
166
179
191
195
145
145
446
446
50494
        461
210
233
461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         59.8%;
                                                                                                                    GLYCOPROTEIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POTENTIAL.
POTENTIAL.
POTENTIAL.
POTENTIAL.
GENERAL
MISSING (IN REF. 4).
GPAA -> APP (IN REF. 4)
GPAA -> CE0EAOSF CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1306; DB 1;
Pred. No. 0.00e+00;
1; Mismatches
TOMOR NECROSIS FACTOR RECEPTOR 1.
EXTRACELULAR (POTENTIAL).
POTENTIAL.
CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     461
                                                                                                                  REPEAT; SIGNAL; APOPTOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ≵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ٥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100
                                                                                                                                                                                                                                                                                                                                                                                                                       덩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

ö

```
SEQUENCE FROM N.A.
MEDLINE; 91187885.
LEWIS M., TARTAGLIA L.A., LEE
WONG G.H., CHEN E.Y., GOEDDEL
PROC. NATL. ACAD. SCI. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-MAY-1992 (REL.
01-MAY-1992 (REL.
01-NOV-1997 (REL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TNR1_MOUSE P25118;
      SEQUENCE FROM N.A. TISSUE-SPLEEN;
                                                                                                                                                                                                   GOODWIN R.G., ANDERSON D., JERZY R., COPELAND N.G., JENKINS N.A., SMITH C MOL. CELL. BIOL. 11:3020-3026(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MUS MUSCULUS (MOUSE).
EUKARYOTA; METAZOA; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TUMOR NECROSIS
                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. MEDLINE; 91246168.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EUTHERIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KQDTICNCHSGFFLRDKECVSCVNCKNA-DCKNLCPATSETRNDFQDTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KONTVCTCHAGFFLRENECVSCSNCKKSLECTKLSLPQIENVKGTEDSGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               l Similarity
123; Conse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            46.48;
larity 71.98;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REL. 22,
REL. 35,
REL. 35,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
RECEPTOR 1 PRECURSOR (P60) (TNF-R1) (P55).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1012; DB 1; Pred. No. 1.63e-244; 25; Mismatches 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 THER-CYS.
THER-TYS.
THER-CYS.
THER-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 X TNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL.
POTENTIAL.
8E2C350A CRC32;
                                                                                                                                                                                                                                                                                                                                     A., BENNETT G.L., F
D.V.;
88:2830-2834(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Y SIMILARITY
                                                                                                                                                                                                                          DAVIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TETRAPODA; MAMMALIA
                                                                                                                                                                                                                                                 T.,
                                                                                                               KISSONERGHIS A.M.,
                                                                                                                                                                                                                                                 BRANNAN C.I.,
                                                                                                                                                                                                                                                                                                                                                                                    RICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1:
      MOL. IMMUNOL. 30:165-175(1993).

MOL. IMMUNOL. 30:165-175(1993).

-:- FUNCTION: RECEPTOR FOR THE ACTIVATED RECEPTOR. THE RESULTING RECRUITS CASPASE-8 TO THE ACTIVATED RECEPTOR. THE RESULTING AGGREGATE CALLED THE DEATH-INDUCING SIGNALING COMPLEX (DISC.) PERFORMS CASPASE-8 PROTEOLYTIC ACTIVATION WHICH INITIATES THE SUBSEQUENT CASCADE OF CASPASES (ASPATARY-SPECIFIC CYSTEINE PROTEASES) MEDIATING APOPTOSIS (BY SIMILARITY).

-!- SUBUNIT: THE BINDING TO THE EXTRACELIULAR DOMAIN OF THEFI LEADS TO HOMOTRIMERIZATION. ONCE AGGREGATED THE RECEPTORS DEATH DOMAINS PROVIDE A NOVEL MOLECULAR INTERFACE THAT INTERACTIS SPECIFICALLY WITH THE DEATH DOMAIN OF TRADD. VARIOUS TRADD-INTERACTING PROTEINS SUCH AS TRAFS, RIP AND POSSIBLY FADD, ARE RECRUITED TO THEFI COMPLEX BY THEIR ASSOCIATION WITH TRADD. THIS COMPLEX ACTIVATES AT LEAST TWO DISTINCT SIGNALING CASCADES, APOPTOSIS AND NF-KAPPA B SIGNALING (BY SIMILARITY).

-I- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; M60468; G199826; -.
EMBL; M59377; G202097; -.
EMBL; X59238; G53579; -.
EMBL; X57796; G54849; -.
EMBL; L263449; G430733; -.
EMBL; M68067; G202102; JOIN
EMBL; M76655; G202102; JOIN
EMBL; M76655; G202102; JOIN
EMBL; M76655; G202102; JOIN
  REPEAT
DISULFID
CARBOHYD
CARBO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IMMUNOGENETICS
[6]
SEQUENCE FROM N
MEDLINE; 931567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FI
MEDLINE; 94
BEBO B.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHAIN
DOMAIN
TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE;
PROSITE;
RECEPTOR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ROTHE
MOL. I
-!- FU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE; 92039815.
ROTHE J.G., BROCKHAUS M., GENTZ R.,
IMMUNOGENETICS 34:338-340(1991).
[5]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PIR; A38634; GQMST1
PIR; S16677; S16677
PIR; S19021; S19021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>+</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HSSP; P19438;
MGD; MGI:98781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P19438; 1TNR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         93156721.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PS00652; TNFR_NGFR_1; 3
PS50050; TNFR_NGFR_2; 3
PS50017; DEATH_DOMAIN;
PS50017; GLYCOPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FROM N.A.
94245292.
', LINTHICUM D.S.;
NETICS 39:450-451(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BLUETHMANN H., GENTZ R., NOL. 30:165-175(1993).
  S19021.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TNFR1
  GLYCOPROTEIN;
                                                                                                                                                                                                                                                                                                                                                                               EXTRACTION OF THE POTENTIAL) CYTOPLASMIC (POTENTIAL) .

4 X THER-CYS 1.

THER-CYS 2.

THER-CYS 3.
TNFR-CYS 2.
TNFR-CYS 3.
TNFR-CYS 3.
TNFR-CYS 4.
DEATH DOMAIN.
BY SIMILARITY.
BY S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TUMOR NECROSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LESSLAUER W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LESSLAUER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REPEAT; SIGNAL; APOPTOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FACTOR RECEPTOR
  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STEINMET 2
```

Š 밁 S

101 83

밁

41

23

Query Match Best Local Matches

Local

REPEAT
RE

S 밁

143 161

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    So
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INTEL_RAT STANDARD THREE TRANSPORT TO THE TRANSPORT THREE TRAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LANTZ M., OLSSON I., HAUPTMANN R., STRATOWA C., ADOLF G.R.;
DNA CELL BIOL. 9:705-715(1990).

-!- FUNCTION: RECEPTOR FOR THE ALPHA. THE ADAPTOR MOLECULE FADD
RECRUITS CASPASE-8 TO THE ACTIVATED RECEPTOR. THE RESULTING
REGREGATE CALLED THE DEATH-INDUCING SIGNALING COMPLEX (DISC)
PERFORMS CASPASE-8 PROTEOLYTIC ACTIVATION WHICH INITIATES THE
SUBSEQUENT CASCADE OF CASPASES (ASPARTATE-SPECIFIC CYSTEINE
PROTEASES) MEDIATING APOPTOSIS (BY SIMILARITY).

-!- SUBUNIT: INF BINDING TO THE EXTRACELLULAR DOMAIN OF THERI LEADS TO
HOMOTRIMETIZATION. ONCE AGGREGATED THE RECEPTORS DEATH DOMAINS
PROVIDE A NOVEL MOLECULAR INTERFACE THAT INTERACTS SPECIFICALLY
WITH THE DEATH DOMAIN OF TRADD. VARIOUS TRADD. ARE RECRUITED TO
PROTEINS SUCH AS TRAFS, RIP AND POSSIBLY FADD, ARE RECRUITED TO
TOFRI COMPLEX BY THEIR ASSOCIATION WITH TRADD. THIS COMPLEX
ACTIVATES AT LEAST TWO DISTINCT SIGNALING CASCADES, APOPTOSIS AND
HE-VENDER DE CYCANATION OF THAT THIS COMPLEX
ACTIVATES AT LEAST TWO DISTINCT SIGNALING CASCADES, APOPTOSIS AND
    REPEAT
REPEAT
REPEAT
REPEAT
REPEAT
DOMAIN
DISULFID
DISULFID
DISULFID
                                                                                                                                                                      PIR M63
PIR, M63
PIR, P199
HSSP; P199
PROSITE; I
PROSITE; I
PROSITE; I
PROSITE; I
PROSITE; I
TRANSMEM
TRANSMEM
DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RATTUS NORVEGICUS (RAT).
EUKARYOTA; METAZOA; CHOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EUTHERIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LANTZ M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HIMMLER A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ÆDLINE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23
                                                                                                                                                                                                                                                                                                                                                                                                                                      NF-KAPPA B SIGNALING (BY SIMILARITY).
SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN.
SUBLARITY: CONTAINS A LA-NGFR/TNFR-TYPE CYSTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B36555; B36555.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P19438; ITNR.
TE; PS00652; TNFR_NGFR_1; 3.
TE; PS50050; TNFR_NGFR_2; 3.
TE; PS50017; DEATH_DOMAIN; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               91090841
                                                                                                                                                                                                                                                                                                 TRANSMEMBRANE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MAURER-FOGY I., KROENKE M., SCHI
LSSON I., HAUPTMANN R., STRATOWA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   43.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHÓRDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50129 MW;
                                                                                                                                                                                                                                                                           GLYCOPROTEIN; REPEAT; SIGNAL; APOPTOSIS, POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 944; DB 1; Le
Pred. No. 2.69e-225;
28; Mismatches 27;
  TNFR-CYS 4.
DEATH DOMAIN.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                       TNFR-CYS
                                                                                                                                                                   POTENTIAL.
CYTOPLASMIC (POTENTIAL)
X TNFR-CYS.
                                                                                                                                                4 X TNFR-CYS.
TNFR-CYS 1.
                                                                                                                                                                                                                                EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                          TUMOR NECROSIS FACTOR RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4B6EEC09 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SCHEURICH P.,
TOWA C., ADOLF
                                                                                                                                                                                                                                                                                                                                                                                                                                             CYSTEINE-RICH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 454;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (TNF-R1) (P55).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PFIZENMAIER G.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                             REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Χ.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۲,
REAL STREET OF S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GLHA_HUMAN STAI
P01215;
21-JUL-1986 (REL. (
21-JUL-1986 (REL. (
01-NOV-1997 (REL.
                                                                                                                                                                                                                              SEQUENCE OF 1-24.
MEDLINE; 81117268.
BIRKEN S., FETHERSTON J.
BIOL. CHEM. 256:1816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
BIOCHEM.
                     SAIRAM M.R., PAPKI
BIOCHEM. BIOPHYS.
                                                                                                                    SEQUENCE OF 28-116.
MEDLINE: 77243687.
SAIRAM M.R., LI C.H.:
CAN. J. BIOCHEM. 55:755-760(1977).
                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 1-98 FROM MEDLINE; 82267643. FIDDES J.C., GOODMAN F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
MEDLINE; 80011660.
FIDDES J.C., GOODMAN H.M.;
NATURE 281:351-356(1979).
                                                        SEQUENCE OF 28-116.
MEDLINE; 72242988.
                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE; 94254248.
MEDLINE; 94254248.
MIYOSHI I., KASSI N., HAYASHIZAKI
NIPPON RINSHO 52:940-947(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HOMO SAPIENS (HUMAN) EUKARYOTA; METAZOA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EUTHERIA; PRIMATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101
                                                                                                                                                                                                                                                                                                                                   MOL. APPL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KQNTVCNCHAGFFLSGNECTPCSHCKKNQECMKLCLPPVANVTNPQDSGTA 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNLCPQGKYAHPKNNSICCTKCHKGTYLVSDCPSPGQETVCEVCDKGTETASQNHVRQCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCTLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KONTYCTCHAGFFLRENECVSCSNCKKSLECTKLSLPQIENVKGTEDSGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SCKTCRKEMFQVEISPCKADMDTVCGCKKNQFQRYLSETHFQCVDCSPCFNGTVTIPCKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            84
102
105
127
146
168
188
185
151
                                                                                                                                                                                                                                                                                                                                   GOODMAN H.M.;
.. GENET. 1:3-18(1981).
      PAPKOFF H., L1 C...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HORMONES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ÃĄ,
                                                                                                                                                                                                                              256:1816-1823(1981)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99
117
125
143
158
166
179
191
195
195
201
201
50969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         35,
01,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             42.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
ALPHA CHAIN PRECURSOR.
                                                                                                                                                                                                                                                     ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ¥.
                                                                                                                                                                                                                                                     CANFIELD
                                      C.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred.
26; N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 928; DB 1;
Pred. No. 8.75e-221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BY SIMILARITY.
BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                   48:530-537(1972).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            82F68B08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                   7.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                     BOIME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
```

160

100 82

.-4".

```
PIR; A01481; THUAPP
PDB; 1HCN; 30-SEP-94.
PDB; 1HRP; 01-NOV-94.

MIM; 118850; -.

MIM; 18830; -.

PROSITE; PS00779; GLYCO_HORMONE_ALPHA_1; 1.

PROSITE; PS00780; GLYCO_HORMONE_ALPHA_2; 1.

HORMONE; GLYCOPROTEIN; SIGNAL; 3D-STRUCTURE.

SIGNAL 1 24

CHAIN 25 116 GLYCOPROTEIN HORM
                                                                                                                                                                                                                                                                                      EMBL;
EMBL;
EMBL;
EMBL;
EMBL;
EMBL;
EMBL;
EMBL;
EMBL;
PDB; 1
PDB; 1
                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE: 94261179.
LAPTHORN A.J., HARRIS D.C.,
CANFIELD R.E., MACHIN K.J.,
NATURE 369:455-461(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRUCTURE OF CARBOHYDRATES MEDLINE; 91122088.
WEISSHAAR G., HIYAMA J., RI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY ASSIGNMENT
MEDLINE; 81006887.
MISE T., BAHL O.P.;
J. BIOL. CHEM. 255:8516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 25-116
MEDLINE; 75211304.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE; 74262937.
SHOME B., PARLOW A.F.;
J. CLIN. ENDOCRINOL. M
                                                                                                                                                                                                                                                                                                                                                              MEDLINE; 970
DE BEER T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BELLISARIO R.,
J. BIOL. CHEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF MEDLINE; 74:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RATHNAM P., SA.
J. BIOL. CHEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE, A
                                                                                                                                                                                                                                                                                                                                                                                            STRUCTURE BY NMR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               X-RAY CRYSTALLOGRAPHY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BIOCHIM. BIOPHYS. ACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE; 81021713.
FUJIKI Y., RATHNAM P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY ASSIGNMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 25-116.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MORGAN F.J., BIRKEN S., CANFIELD R.E.;
J. BIOL. CHEM. 250:5247-5258(1975).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF
                                                                                                                                           LUTROPIN, FOLLITROPIN AND GONADOTROPIN.
MMBL; J00152; G183319; -.
MMBL; J00159; G183319; JOINED.
MMBL; J00151; G183319; JOINED.
MMBL; S70585; G546845; -.
MMBL; S70583; G546845; JOINED.
MMBL; S70584; G546845; JOINED.
MMBL; S70584; G546845; JOINED.
MMBL; V00488; G659156; -.
MMBL; V00488; G659156; JOINED.
MMBL; V00487; G669156; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SHAAR G., HIYAMA J., RENWICK A.G.C., J. BIOCHEM. 195:257-268(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0F 25-116.
76005558.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    74011266.
                                                                                                                                                                                                                                                                                                                                                                               97054614.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AND REVISIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .T., WILLIAMS R.M., 37:1828-1828(1978).
                                                                                                                                                                                                                                                                                                                                                 VAN ZUYLEN C.W.E.M., LEEFLAN
KAMERLING J.P., VLIEGENTHART
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-116.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SAXENA B.B.;
EM. 250:6735-6746(1975).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARLSEN R.B., BAHL O.P.; 248:6796-6809(1973).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ).P.;
255:8516-8522(1980).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    METAB. 39:199-202(1974).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ဝှု
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SAXENA B.B.;
624:428-435(1980).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OF DISULFIDE BONDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DISULFIDE BONDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ANGSTROMS).
                                                                                                                                                                                                                                                                                                                                                                                                                                    MORGAN F.J., IS
       GLYCOPROTEIN HORMONES ALPHA CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BISHOP W.H., RYAN R.J.;
                                                                                                                                                                                                                                                                                                                                                                LEEFLANG
                                                                                                                                                                                                                                                                                                                                              J.F.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                      ISAACS N.W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIMIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                HARD
                                                                                                                                                                                                                                                                                                                                                                ×.
                                                                                                                                                                                                                                                                                                                                                                BOELENS
                                                                                                                                                                                                                                                                                                                     BETA
                                                                                                                                                                                                                                                                                                                                                                R.,
                                                                                                                                                                                      SOLUTION OF STREET OF STRE
                                               밁
                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                    밁
                                                                                                                                Query Match
Best Local S
Matches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GLHA_MACMU
P22762;
01-AUG-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
CONFLICT
CONFLICT
                                                                                                                                                                                      CARBOHYD
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                 CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFID DISULFID DISULFID DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                 PROSITE;
HORMONE;
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-AUG-1991
01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A. MEDLINE; 91321740.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                            PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                193
                    260
                                                                           200
                                               95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24
                                                                                                    35
                    RVTVMGGFKVENHTACHCSTCYYHK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31
52
56
83
63
102
108
                                                                                                                                                                                                                   80
80
80
80
80
```

```
MEDLINE; 91321740.

GOLOS T.G., DURNING M., FISHER J.M.;

GOLOS T.G., DURNING M., FISHER J.M.;

DNA CELL BIOL. 10:367-380(1991).

-!- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE
CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,

LUTROPIN, FOLLITROPIN AND GONADOTROPIN.

POR: A39555; A39555.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MĀCĀCA MULATTA (RHESUS MACAQUE).
EUKĀRYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLYCOPROTEIN HORMONES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CVAKSYNRVTVMGGFKVENHTACHCSTCYYHKS 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SAPDVQDCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTC
                                                  CPECKPRENKFFSKPGAPIYQCMGCCFSRAYPTPVRSKKTMLVQKNVTSESTCCVAKSLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAGAAPGCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTC
RVMVMGSVRVENHTECHCSTCYYHK 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CVAKSYNRVTVMGGFKVENHTACHCSTCYYHKS
                                     CPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSYN 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  h 30.8%;
Similarity 93.5%;
87; Conservative
                                                                                         Similarity 71; Conser
                                                                                                                                                                                                                                                                                                   PS00779; GLYCO_HORMONE_ALPHA_1; PS00780; GLYCO_HORMONE_ALPHA_2; GLYCOPROTEIN; SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (REL. 19, CREATED)
(REL. 19, LAST SEQUENCE UPDATE)
(REL. 34, LAST ANNOTATION UPDATE)
N HORMONES ALPHA CHAIN PRECURSOR.
                                                                                        25.3%;
larity 83.5%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A,
                                                                                                                                                 ξ,
                                                                                                                                        24
120
59
88
110
112
115
67
80
106
13785
                                                                                                                                                                                                                                                                                                                                                ECN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55
84
106
108
111
63
76
102
109
109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                 WW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 672; DB 1; Len
Pred. No. 3.55e-149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W.
                                                                                                                                           GLYCOPPOTEIN HORMONES ALPHA CHE BY SIMILARITY.
                                                                                       Score 552;
Pred. No. 3.
4; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       င္သင
                                                                                                                                                                                                                                                                                         BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 -> E (IN REF. 8)
CS -> SC (IN REF.
3BA19E2F CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , ,
                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                  DB 1;
3.70e-116;
3.70 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ጀ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8)
5
                                                                                                                    Length 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AND
                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                          CHAIN
                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                      BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                         Gaps
                                                              94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
RESULT TO SULT THE SULT THE SULT TO SULT THE SUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT THE TENENCE OF THE TENENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GLHA_BOVIN STAN
P01217;
21-JUL-1986 (REL. (
23-CCT-1986 (REL. (
01-NOV-1997 (REL. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLHA_RABIT
P07474;
01-APR-1988
01-APR-1988
01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HORMONE;
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GLYCOPROTEIN HORMONES ALPHA CHAIN.
CGA.
CGA.
ORYCTOLAGUS CUNICULUS (RABBIT).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                MUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 8-133
MEDLINE; 83161058.
NILSON J.H., THOMA
                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE; 84024633.
ERWIN C., CROYLE M.L., DONELSON
BIOCHEMISTRY 22:4856-4860(1983).
                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                   EUTHERIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               EUKARYOTA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7 AMOGCPECKLKENKYFSKLGAPIYQCMGCCFSRAYPTPARSKKTMLVPKNITSEATCCVA 66
                           BIOL.
                                                                                                                                                                                                                                                                                                                                                                                                                        TAURUS (BOVINE).
ARYOTA; METAZOA; CHORDATA;
HERIA; ARTIODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | RAFTKATYMGNAKVENHTECHCSTCYYHKS 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KSYNRVTVMGGFKVENHTACHCSTCYYHKS 285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAPGCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVA 255
                                                                                                                                                                                                                                                                                           R.G., MONC
ACIDS RES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GLYCOPROTEIN.
35
D 11 64
D 32 86
D 36 98
D 36 98
D 56 56
D 58 2 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
69; Conse
                           CHEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PS00779; GLYCO_HORMONE_ALPHA_1; PS00780; GLYCO_HORMONE_ALPHA_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LAGOMORPHA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  111
32
35
36
36
37
37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (REL.
                        THOMASON A.R., CSERBAK M.T.,
M. 258:4679-4682(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HORMONES
                                                                                                                                                                                                                                                                                           MONCMAN
RES. 11:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   35,21
                                                                                                      FROM
                                                                                                                                                                                                                                                                                           AN C.L., ROTTMAN F.
11:6873-6882(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25.1%;
76.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDAT
ALPHA CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
ALPHA CHAIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CREATED)
                                                                                                         N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MW;
                                                                                                                                                                                                                                                                                                                    ROTTMAN F.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 547; DB 1;
Pred. No. 8.57e-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CD56D255 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Y SIMILARITY.
Y SIMILARITY.
Y SIMILARITY.
Y SIMILARITY.
Y SIMILARITY.
                                                                                                                                                                                 ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                    MAURER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ⋛
                                                                                                                                                                                                                                                                                                                                                                                                                                                         TETRAPODA; MAMMALIA;
                                                 MONCMAN C.L.,
                                                                                                                                                                                                                                                                                                                    NILSON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -115;
15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                       J.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                 WOYCHIK R.P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
```

```
RESULT
ACCOMMENSULT
ACCOMMENSUL
                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                GLHA_SHEEP
P01218;
21-JUL-1986 ()
01-APR-1990 ()
01-OCT-1996 ()
GLYCOPROTEIN ()
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
CONFLICT
                                                                   OVIS ARIES (SHEEP).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS00779; GLYCO_HORMONE_ALPHA_1; PROSITE; PS00780; GLYCO_HORMONE_ALPHA_2; HORMONE; GLYCOPROTEIN; SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LUTROPIN, FOLLITROPIN AND (EMBL; X00003; E274391; -. EMBL; X00004; E274391; JOINED. EMBL; X00050; G607; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J. BIOL. CHEM. 249:4166-4174(1974).
1- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA CHAIN WHICH COMPERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, LUTROPIN, FOLLITROPIN AND GONADOTROPIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MAGHUIN-ROGISTER
EUR. J. BIOCHEM.
SEQUENCE FROM N.A. MEDLINE; 90098887.
                                                         EUTHERIA; ARTIODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HSSP; P01215; 1HCN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PIR; A01483;
PIR; A05132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORNELL J.S., PIERCE J.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 80-91 AND MEDLINE; 72012932.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PIERCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY PARTIAL SEQUENCE MEDLINE; 71111429.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 25-120.
MEDLINE; 71111428.
LIAO T.-H., PIERCE J.G.;
J. BIOL. CHEM. 246:850-865(1971).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY
                                                                                                                                                                                                                                                                                                                                                                                      199
                                                                                                                                                                                                                                                                                                                              94 TKATVMGNVRVENHTECHCSTCYYHKS 120 : |||| :|||| ||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                        34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BIOL.
                                                                                                                                                                                                                                                                                                           RVTVMGGFKVENHTACHCSTCYYHKS
                                                                                                                                                                                                                                                                                                                                                                                                          GCPECKLKENKYFSKPDAPIYQCMGCCFSRAYPTPARSKKTMLVPKNITSEATCCVAKAF 93
                                                                                                                                                                                                                                                                                                                                                                                      GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        J.G., LIAO T.-H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                           . Similarity
67; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .G., LIAO T.-H., CARLSEN R.B.,
CHEM. 246:866-872(1971).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             74307752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25
35
36
60
60
80
106
13
37
13
52
                                                                                                                                  (REL. 01, CREATED)
(REL. 14, LAST SEQUENCE UPDATE)
(REL. 34, LAST ANNOTATION UPDATE)
N HORMONES ALPHA CHAIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTBOA.
: A05132.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ASSIGNMENT OF DISULFIDE BONDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A
A
                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       G., HENNEN G.P.;
21:489-497(1971).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25.1%;
77.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
59
110
1112
1152
1153
1066
1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 549; DB 1; L
Pred. No. 2.44e-115;
7; Mismatches 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GLYCOPROTEIN HORMONES A
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99015305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        > T (IN REF.
> Q (IN REF.
> A (IN REF.
                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REIMO T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                بر بر
                                                                                                                                                                                                                               ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N & N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ALPHA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
RESULT
ID GI
AC PI
DT 0
DT 0
DT 0
                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                         SOLITIFIED TO THE TRANSPORT OF THE TRANS
                                                                                                                 Ş
                                                                                                                                            밁
                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                             Query Matc
Best Local
                                                                                                                                                                                                                                 Matches
  ULT 10

GLH1_RAT

P11962; P70516;

01-OCT-1989 (REI

01-OCT-1989 (REI

01-NOV-1997 (REI
                                                                                                                                                                                                                                                                                                                                HORMONE;
SIGNAL
CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF MEDLINE; 72; LIU W.-K., 1 WARD D.N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BELLO P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY ASSIGNMENT OF DISULFIDE BONDS CHUNG D., SAIRAM M.R., LI C.H.; ARCH. BIOCHEM. BIOPHYS. 159:678-682(1973)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE; 91006170
WEISSHAAR G., HIY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRUCTURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SAIRAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 25-120.
MEDLINE; 82113052.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE; 73190034.
SAIRAM M.R., PAPKOFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                        199
                                                                                                                  259
                                                                                                                              94 TKATVMGNVRVENHTECHCSTCYYHKS 120
: |||| :|||| ||||||||||
                                                                                                                                                                                       34 GCPECKLKENKYFSKPDAPIYQCMGCCFSRAYPTPARSKKTMLVPKNITSEATCCVAKAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BIOL.
                                                                                                                                                                                                                                                             Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JINE; 910001/0A.

SSHAAR G., HIYARA J., RENWICK A.U.C.,

SUBAR G., HIYAR J., RENWICK A.U.C.,

J. BIOCHEM. 192:741-751(1990).

SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,

CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LUTROPIN, FOLLITROPIN
1; X16977; G1366; -.
A01483; TTBOA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A01484; UTSHA.
$06935; $06935.
$13200; $13200.
                                                                                                                 NRVTVMGGFKVENHTACHCSTCYYHKS
                                                                                                                                                                        GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSY 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      M M.R., PAPKOFF H.,
BIOCHEM. BIOPHYS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACIDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 OF 25-120.
; 72211144.
K., NAHM H.S.,
                                                                                                                                                                                                                               Similarity
67; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1215; 1HCN.
PS00779; GLYCO_HORMONE_ALPHA_1;
PS00780; GLYCO_HORMONE_ALPHA_2;
GLYCOPROTEIN; SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHEM.
 (REL.
                                                                                                                                                                                                                                                                                        25
35
36
56
60
80
106
106
27
27
112
112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOUNTFORD P.S., BRANDON M.R., ADAMS DS RES. 17:10494-10494(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 197:535-539(1981)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYDRATES.
                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             247:4351-4364(1972)
                                                                                                                                                                                                                                                                                        Α
Α
.
                                                          STANDARD;
  12,
12,
35,
                                                                                                                                                                                                                                                                                                                    120
59
88
110
112
115
115
27
27
                                                                                                                                                                                                                                             25.1%;
77.0%;
                                                                                                                                                                                                                                                                                        13588
 CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SWEENEY C.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , LI C.H.;
153:554-571(1972).
                                                                                                                                                                                                                                                                                         MW.
                                                                                                                                                                                                                                                                                                                                                                                       GLYCOPROTEIN HORMONES A
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                              Score
Pred.
7; M
                                                                                                                                                                                                                                                                                     D -> N (IN
E -> Q (IN
E -> Q (IN
CS -> SC (I
%; 13BA4DE1
                                                           PRT;
                                                                                                                                                                                                                                             549;
No. 2.
                                                                                                                                                                                                                                                                                     N (IN REF. 2).
Q (IN REF. 2).
Q (IN REF. 2 TO 4
Q (IN REF. 3).
> SC (IN REF. 3).
BA4DEl CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LAMKIN
                                                          120
                                                                                                                                                                                                                              DB 1; Le
1.44e-115;
ches 13;
                                                          ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W.M.,
                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BAKER H.N.,
                                                                                                                                                                                                                                                                                                                   څ
                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ALPHA CHAIN
                                                                                                                                                                                                                                                            120;
                                                                                                                                                                                                                               0
                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                   93
                                                                                                                                                                                                                               0
RESULT ID GIAC PROCESS BEING CO.
                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                    B
```

```
Query Match
Best Local S
Matches 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZOOL. SCI. 7:877-865(1990).

-i- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UCHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTE LUTROPIN, FOLLITROPIN AND GONADOTROPIN.

R EMBL; V01252; G56580; --
R EMBL; V01257; G206111; --
R EMBL; M22529; --; NOT_ANNOTATED_CDS.

R EMBL; M25544; G204470; --
R EMBL; M25544; G204471; --
R EMBL; M25544; G204471; --
R EMBL; M25544; G204471; --
R EMBL; M25545; G220842; --
                                                                                                                                                                      GLHA_BALAC
P37036;
01-JUN-1994
01-JUN-1994
01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DISULFID
DISULFID
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIGNAL
CHAIN
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE;
PROSITE;
HORMONE;
                                                EUKARYOTA;
EUTHERIA; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE;
BURNSIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-SPRAGUE-DAWLEY; TISSUE-PITUITAN MEDLINE; 82214055.
GODINE J.E., CHIN W.W., HABENER J.F.;
J. BIOL. CHEM. 257:8368-8371(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GLYCOPROTEIN HORMONES ALPHA CHAIN 1 PRECURSOR. RATTUS NORVEGICUS (RAT). EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETFEUTHERIA; RODENTIA. [1]
                                                                                                                           GLYCOPROTEIN CGA.
                                                                     BALAENOPTERA ACUTOROSTRATA EUKARYOTA; METAZOA; CHORDAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
STRAIN-WISTAR-IMAMICHI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                     259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         199
                                                                                                                                                                                                                                                                                                                                                                                                                94 TKATVMGNARVENHTDCHCSTCYYHKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JENCE FROM N.A.
LINE; 89196918.
VSIDE J., BUCKLAND
E 70:67-74(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JT0408; TTRTA.
S27385; S27385.
P01233; 1HRP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCPECKLKENKYFSKLGAPIYQCMGCCFSRAYPTPARSKKTMLVPKNITSEATCCVAKSF
                                                                                                                                                                                                                                                                                                                                                                                     NRVTVMGGFKVENHTACHCSTCYYHKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity 68; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PS00779; GLYCO_HORMONE_ALPHA_1; PS00780; GLYCO_HORMONE_ALPHA_2; GLYCOPROTEIN; SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EZASHI T., HIRAI
I. 7:877-885(1990)
                                                   CETACEA
                                                                                                                                              (REL. 29, CREATED)
(REL. 29, LAST SEQUENCE UNITED CONTROL OF CREED CONTROL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ą,
                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24
120
59
88
110
112
115
115
106
84
13453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE-PITUITARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .
R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE-ANTERIOR PITUITARY;
NI T., KATO T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ¥.
                                                                                                (MINKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GLYCOPROTEIN HORMONES A
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 544; DB 1; I
Pred. No. 5.64e-114;
6; Mismatches 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROBABLE.
E -> Q (I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROBABLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERTEBRATA; TETRAPODA;
                                                                        (NKE WHALE)
VERTEBRATA;
                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -> Q (IN
5E507A0D
                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W. W. ;
                                                                                                                                                                                                                                                                                                                                                                                     285
                                                                                                                                                                            UPDATE)
                                                                                                                                                                                                                                                                               96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                G206111).
CRC32;
                                                                        (LESSER RORQUAL); TETRAPODA; MAMM
                                                                                                                                                                                                                                                                               ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ALPHA CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MAMMALIA;
                                                                           MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          UNIQUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
밁
                                                                                                                                                   STITION OF THE STITE OF THE STI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                Query Match
Best Local S
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GLH2_RAT

P11963;

P11963;

01-OCT-1989 (REL. 12, CREATED)

01-OTT-1989 (REL. 12, LAST SEQUENCE UPDATE)

01-JUN-1994 (REL. 29, LAST ANNOTATION UPDATE)

GLYCOPROTEIN HORMONES ALPHA CHAIN 2 PRECURSOR.

RATTUS NORVEGICUS (RAT).

EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAP

EUTHERIA; RODENTIA.

[1]
                                                                                                                                                                      CARBOHYD
CARBOHYD
                                                                                                                                                                                                               PROSITE;
HORMONE;
SIGNAL
CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HSSP; PNO1
PROSITE;
PROSITE;
HORMONE;
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KARASEV V.S., PANKOV Y.A.;
BIOKHIMIIA 50:1972-1986(1985).
-!- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, LOTROPIN, FOLLITROPIN AND GONADOTROPIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                         GODINE J.E., CHIN W.W., HABENER J.F.;
J. BIOL. CHEM. 257:8368-8371(1982).
-!- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, EQLLITROPIN AND GONADOTROPIN.
EMBL; V01253; G56583; -.
EMBL; V01253; G56583; -.
                                                                                                                                                                                                                                                                                                                                                                                                                          HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. MEDLINE; 82214055.
                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      259 NRVTVMGGFKVENHTACHCSTCYYHKS 285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          199
34 GCPECKLKENKYFSKLGAPIYQCMGCCFSRAYPTPARSKKTMLVPKNITSEATCCVAKAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     / Match 24.8%;
Local Similarity 70.1%;
nes 61; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PN0138; PN0138. ; P01215; 1HCN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TKATVMGBARVZNHTZCHCSTCYYHKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSY 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCPZCKLKZBKYFSKLGAPIYZCMGCCFSRAYPTPARSKKTMLVPKNITSZATCCVAKAF 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E: PS00779; GLYCO_HORMONE_ALPHA_1; 1.
E: PS00780; GLYCO_HORMONE_ALPHA_2; 1.
E: GLYCOPROTEIN.
II 35 BY SIMILARITY
IID 14 64 BY SIMILARITY
IID 32 86 BY SIMILARITY
IID 36 88 BY SIMILARITY
IID 36 81 BY SIMILARITY
IID 63 91 BY SIMILARITY
IID 63 91 BY SIMILARITY
IID 56 56
IYD 56 56
IYD 82 82
IYD 56 56
IYD 82 82
IYD 56 6A; 10720 MW; E2CD30DF CRC
                                                                  Similarity
67; Conser
                                                                                                                                                                                                                                                                                                                                                        PS00779; GLYCO_HORMONE_ALPHA_1; PS00780; GLYCO_HORMONE_ALPHA_2; GLYCOPROTEIN; SIGNAL.
                                                                                                                                                 25
25
35
38
56
60
60
87
80
106
                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1HCN.
                                                                                                                                                                                                                                                                                                                                                                                                                          1HCN.
                                                                                                                                                   ă,
                                                                                                                                        24
120
59
88
110
112
112
115
106
106
                                                                                     24.8%;
77.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHORDATA; VERTEBRATA; TETRAPODA;
                                                                                                                                                     X.
                                                                                                                                                                  GLYCOPROTEIN HORMONES A
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
PROBABLE.
PROBABLE.
                                                                                     Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
Pred.
13; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Y SIMILARITY.
Y SIMILARITY.
Y SIMILARITY.
Y SIMILARITY.
Y SIMILARITY.
                                                                                                                                                   4E4FAB2E CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                  Mismatches
                                                                                     542;
No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           542;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CRC32;
                                                                                   DB 1;
.98e-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
.98e-11
                                                                113;
                                                                                                      Length 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                    ALPHA CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MAMMALIA;
                                                                0,
                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                         93
                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
SAFFERS
                                                                                                                                                                  Ş
                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                        δõ
                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                      SOLUTION AND CONTRACT AND CONTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WHICH CONFERS BIOLOGICAL LUTROPIN, FOLLITROPIN AND GONADO DR EMBL; U008643; G202180; -.

PR EMBL; W00852; G54799; -.

PR EMBL; M22991; -; NOT_ANNOTATED_CDS.

R EMBL; M22992; G575520; -.

PIR; A01482; TIMSA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              γ
                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 6
GLHA_PIG
P01219;
21-JUL-1986 ()
01-FEB-1991 ()
01-OCT-1996 ()
GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLHA_MOUSE
P01216;
21-JUL-1986
21-JUL-1986
01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDILINE: 034.000 M.M., RIDGWAY E.C.,
GORDON D.E.F., WOOD M.M., RIDGWAY E.C.,
DNA 7:679-690(1988).
-i- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND
CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THY
                                                                                                                                                                                                                                                                                                                                                                                    HORMONE;
SIGNAL
CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MSD; MG1:88390; CGA.

PROSITE; PS00779; GLYCO_HORMONE_ALPHA_1;

PROSITE; PS00780; GLYCO_HORMONE_ALPHA_2;

ROSITE; GLYCOPROTEIN; SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGA.
MUS MUSCULUS (MOUSE).
THEARYOTA; METAZOA; CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROC. N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. MEDLINE; 82060239.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GLYCOPROTEIN
                                                                                                                                                                  259
                                                                                                                                                                                                                                          199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  199
                                                                                                                                                                                                    94
                                                                                                                                                                                                                                                                           34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94
                                                                                                                                                                                       TKATVMGNARVENHTECHCSTCYYHKS
                                                                                                                                                                                                                                        GCPECTIQENPERSOPGAPILOCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSY 258
                                                                                                                                                                                                                                                           GCPECKLKENKYFSKLGAPIYQCMGCCFSRAYPTPARSKKTMLVPKNITSEATCCVAKAF 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NRVTVMGGFKVENHTACHCSTCYYHKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TKATVMGNARVENHTECHCSTCYYHKS
                                                                                                                                                                  NRVTVMGGFKVENHTACHCSTCYYHKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W.W., I
                                                                                                                                                                                                                                                                                                           24.8%;
Similarity 77.0%;
67; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KRONENBERG H.
                                                                                                                                                                                                                                                                                                                                                                                  255
355
356
566
560
1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (REL.
(REL.
(REL.
                    (REL.
(REL.
(REL. 01,
(REL. 17,
(REL. 34,
HORMONES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HORMONES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N.A.
                                                                                                                                                                                                                                                                                                                                                                                      ξ,
                                                                                                                                                                                                                                                                                                                                                                           120
59
88
110
1110
1112
1112
1113
110
106
                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ¥01,
CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDAT
ALPHA CHAIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CREATED)
LAST SEQUENCE UP
LAST ANNOTATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ALPHA CHAIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H.M., DE
                                                                                                                                                                                                                                                                                                                                                                                      ž
                                                                                                                                                                                                                                                                                                           Score 542;
Pred. No. 1.
7; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEE P.C., MALOOF F., HABENER
A. 78:5329-5333(1981).
                                                                                                                                                                                                                                                                                                                                                                                                                                       GLYCOPROTEIN HORMONES ALPHA CHAIN.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                         PROBABLE
                                                                                                                                                                                                                                                                                                                                                                                                                          PROBABLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERTEBRATA;
                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                      86F1F31A
                                                                                                                                                                                                                                                                                                           re 542; DB 1; Le
d. No. 1.98e-113;
Mismatches 13;
                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                      CRC32;
                                                                                         ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TETRAPODA;
                                                                                                                                                                                                                                                                                                                                               Length 120
                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        THYROTROP IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A UNIQUE BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     J.F.;
                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                               0
```

CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;

```
RESULT
ID GI
AC PE
DT 01
DT 01
DT 01
DT 02
COC ECC
OC ECC
OC PA
                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                      В
                                                                                                                                       Ş
                                                                                                                                                           밁
                                                                                                                                                                                                                           Query Match
Best Local S
Matches 6
                                                                                                                                                                                                                                                                   PROSITE: PS00779; GLYCO_HORMONE_ALPHA_1; 1.
PROSITE: PS00780; GLYCO_HORMONE_ALPHA_2; 1.
HORMONE: GLYCOPROTEIN; SIGNAL.

SIGNAL 25 120
CHAIN 25 120
DISULFID 38 88 BY SIMILARITY.
DISULFID 56 110
DISULFID 56 110
DISULFID 60 112
DISULFID 60 112
DISULFID 87 115
CARBOHYD 80 80
CARBOHYD 106 106
SEQUENCE 120 AA; 13532 MW; 8749DBA5 CRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGA.
SUS SCROFA (PIG).
EUKARYOTA; METAZOA; CHOR
EUTHERIA; ARTIODACTYLA.
[1]
                                                                                                                                                                                                                                                                                                                                                                                                           P80665;
01-0CT-1996 (REL. 34, CREATED)
01-0CT-1996 (REL. 34, LAST SEQUENCE UPDATE)
01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
01YCOPROTEIN HORMONES ALPHA CHAIN.
STRUTHIO CAMELUS (OSTRICH).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 31-120.
MEDLINE; 74075725.
MAGHDIN-ROGISTER G., COMBARNOUS Y.,
EUR. J. BIOCHEM. 39:255-263(1973).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
MEDLINE; 89325834.
HIRAI T., TAKIKAWA H.,
MOL. CELL. ENDOCRINOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N. KATO Y., EZASHI
PALAEOGNATHAE; [1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY ASSIGNMENT OF DISULFIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENDOCRINOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY SEQUENCE OF 25-120.
CLOSSET J., MAGHUIN-ROGISTER G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUBMITTED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE; 75093922
                                                                                             GLHA_STRCA
                                                                                                                                      259 NRVTVMGGFKVENHTACHCSTCYYHKS
                                                                                                                                                                                 199
                                                                                                                                                          94 TKATVMGNARVENHTECHCSTCYYHKS 120
                                                                                                                                                                                            34 GCPECKLKENKYFSKLGAPIYQCMGCCFSRAYPTPARSKKTMLVPKNITSEATCCVAKAF 93
                                                                                                                                                                                GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSY
                                                                                                                                                                                                                         h 24.8%;
Similarity 77.0%;
67; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FROM N.A.
EZASHI T., H
) (MAR-1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EXP. 8:164(1974).
            STRUTHIONIFORMES
                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HIRAI T., KATO T.;
) TO EMBL/GENBANK/DDBJ DATA BANKS.
                     CHORDATA; VERTEBRATA; TETRAPODA; AVES;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KATO Y.;
63:209-217(1989).
                                                                                                                                                                                                                                                                                                  GLYCOPROTEIN HORMONES A
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                         Score 542; DB 1; Le
Pred. No. 1.98e-113;
7; Mismatches 13;
                                                                                              PRT;
                                                                                                                                                                                                                                                                     8749DBA5 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HENNEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BONDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HENNEN
                                                                                             96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ດ
:
                                                                                             ₿
                                                                                                                                                                                                                                                                                                                                                                                         ດ
::
                                                                                                                                                                                                                                              Length 120;
                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                         ALPHA CHAIN
                                                                                                                                                                                                                           0
                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                           0
```

```
Search co
Job time
                                                                 밁
                                                                                   Ş
                                                                                                                                                                            SO TITIES
                                          Ş
                                                                                                          밁
                                                                                                                                 Matches
                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                PROSITE;
PROSITE;
HORMONE;
                                                                                                                                                                                      DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                     SEQUENCE.

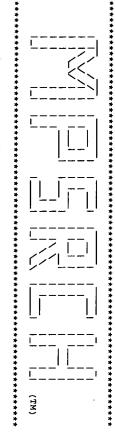
MEDLINE; 97025333.

KOIDE Y., PAPKOFF H., KAWAUCHI H.;

EUR. J. BIOCHEM. 240:262-267(1996).

-!- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE
                                                                                                                                                                            SEQUENCE
                                           259
                                                                                     199
 completed: Wed ne : 42 secs.
                                                               70
                                                                                               10 GCPECKLGENRFFSKPGAPVYQCTGCCFSRAYPTPLRSKKTMLVPKNITSEATCCVAKAF
                                                                                                                                          Local
                                                                                                                                                                                                                                                                           CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, LUTROPIN, FOLLITROPIN AND GONADOTROPIN.
SITE: PS00779; GLYCO_HORWONE_ALPHA_1; 1.
SITE: PS00780; GLYCO_HORWONE_ALPHA_2; 1.
                                                      TKITLKDNVKIENHTECHCSTCYYHKS
                                          NRVTVMGGFKVENHTACHCSTCYYHKS
                                                                                  GCPECTLQENDFFSQPGAPILQCMGCCFSRAYDTPLRSKKTMLYQKNVTSESTCCVAKSY
                                                                                                                               Similarity
65; Conser
                                                                                                                                                                                     ; GLYCOPROTEIN.
1 35
D 14 64
D 32 86
D 36 88
D 63 91
D 56 56
D 82 82
                                                                                                                                                                            96
                                                                                                                               Conservative
                                                                                                                                                                            À.
           мау
                                                                                                                                          24.78;
74.78;
                                                                                                                                                                            10781 MW;
           σ
           08:58:56
                                                                                                                                                                                     BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
POTENTIAL.
POTENTIAL.
                                                                                                                               Score 539; DB 1; L
Pred. No. 1.30e-112;
10; Mismatches 12;
                                                                                                                                                                            DDF7B4BB CRC32;
                                                               96
                                                                                                                                                     Length 96;
                                                                                                                                 Indels
                                                                                                                               0
                                                                                                                                                                                                                                                                                                                        BETA
                                                                                                                               Gaps
                                                                                     258
                                                                                                          69
                                                                                                                                 0
```

THIS PAGE BLANK (USPTO)



Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Tabular output not generated. Wed May 6 08:59:13 1998; MasPar time 14.96 Seconds 802.180 Million cell updates/sec

Description: Perfect Score: >US-08-804-166-6 (1-285) from US08804166.pep 2183

Sequence: 1 SRTSLILAFGLLCLPWLQEG......GFKVENHTACHCSTCYYHKS 285

Scoring table: PAM 150 Gap 11

Searched: 140555 seqs, 42109429 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database:

sptremb15
1:sp\_fungi 2:sp\_human 3:sp\_invertebrate 4:sp\_mammal
5:sp\_mhc 6:sp\_organelle 7:sp\_phage 8:sp\_plant
9:sp\_bacteria 10:sp\_rodent 11:sp\_virus 12:sp\_vertebrate
13:sp\_unclassified

Statistics: Mean 41.694; Variance 64.494; scale 0.646

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result	Score	Query Match	Length	DB	Ħ	Description	Pred. No.
۳ ا	959	43.9	471	4	019131	TUMOR NECROSIS FACTOR-	7.07e-219
2	943	43.2	180	4	Q95185	TUMOUR NECROSIS FACTOR	1.42e-214
ω	453	20.8	107	12	Q90286	GONADOTROPIN ALPHA SUB	3.04e-85
4	454	20.8	108	12	Q90287	GONADOTROPIN ALPHA SUB	1.68e-85
<sub>5</sub>	452	20.7	119	12	Q91370	GONADOTROPHIN ALPHA 1	5.48e-85
σ	448	20.5	114	12	Q91371	GONADOTROPHIN ALPHA 2	5.78e-84
7	433	19.8	117	12	Q91119	GLYCOPROTEIN HORMONES	3.90e-80
œ	334	15.3	55	10	Q62589	ALPHA SUBUNIT OF GLYCO	2.97e-55
9	249	11.4	277	N	014866	SOLUBLE DEATH RECEPTOR	1.12e-34
10	249	11.4	426	N	014865	DEATH RECEPTOR 3 BETA.	1.12e-34
11	247	11.3	253	N	000276	LYMPHOCYTE ASSOCIATED	3.31e-34
12	247	11.3	380	N	000280	LYMPHOCYTE ASSOCIATED	3.31e-34
13	247	11.3	418	N	000275	LYMPHOCYTE ASSOCIATED	3.31e-34
14	214	9.8	348	11	Q85407	HOMOLOG OF VACCINIA VI	1.52e-26
15	214	9.8	349	11	089118	SOMALIA-1977 RIGHT NEA	1.52e-26
16	214	9.8	349	11	289098	GARCIA-1966 RIGHT NEAR	1.52e-26
17	210	9.6	355	11	Q85308	SECRETED RECEPTOR BIND	1.24e-25
18	206	9.4	459	10	Q62327	TUMOR NECROSIS FACTOR	1.00e-24
19	204	9.3	401	10	008727	OSTEOPROTEGERIN.	2.84e-24
20	194	8.9	401	N	000300	OSTEOPROTEGERIN.	5.02e-22

45	44	43	42	41	40	39	38	37	36	<u>3</u> 5	34	ω ω	32	<u>ω</u>	30	29	28	27	26	25	24	23	22	21
142	143	146	147	150	155	154	159	160	160	167	167	173	179	178	180	180	181	181	181	181	181	181	187	191
6.5	6.6	6.7		6.9	7.1	7.1	7.3	7.3	7.3	7.7	7.7		8.2		8.2	8.2				8 . 3				8.7
314	212	217	217	274	217	199	468	245	202	217	202			299	283	259	440	440	411	411			267	
N	4	4	4	N	N	N	N	N	N	N	N	5	Ŋ	N	N	N	N	N	N	N	N	10	4	10
Q14293	Q07368	Q07369	Q07367	Q13663	Q14407	Q14406	000220	014644	014643	Q16631	Q14405	035305	Q16042	014798	Q92956	014755	014763	015531	014720	015508	015517	Q63199	002764	ZT / 800
FAS SOLUBLE PROTEIN.	SOMATOTROPIN 2 PRECURS	SOMATOTROPIN 3 PRECURS	SOMATOTROPIN 1 PRECURS	CELL SURFACE ANTIGEN O	CHORIONIC SOMATOMAMMOT	CHORIONIC SOMATOMAMMOT	CYTOTOXIC LIGAND TRAIL	PLACENTAL GROWTH HORMO	PLACENTAL GROWTH HORMO	SOMATOTROPIN PRECURSOR	SOMATOTROPIN PRECURSOR	RANK.	TUMOR NECROSIS FACTOR	CYTOTOXIC TRAIL RECEPT	HERPESVIRUS ENTRY MEDI	TRAIL RECEPTOR 3.	INDUCING	APOPTOSIS INDUCING PRO	DEATH RECEPTOR 5.	P53-REGULATED DNA DAMA	CYTOTOXIC TRAIL RECEPT	FAS ANTIGEN PRECURSOR.	OX40 PRECURSOR (FRAGME	OSTEOPROTEGERIN.
.68e-	4.19e-11	1.02e-11	6.39e-12	1.54e-12	1.41e-13	2.28e-13	2.04e-14	1.25e-14	1.25e-14	•	4.07e-16	2.08e-17	.03e-	1.71e-18	6.24e-19	. 24e	3.77e-19	.77e	.77e	3.77e-19	.77e		1.80e-20	2.346-21

## ALIGNMENTS

AC Q95185; DT 01-FEB-1997 DT 01-FEB-1997	RESULT 2 ID Q95185	Db 101 SCSRCRD    :   Qy 83 SCSKCRK Db 161 RQDTICH : : :  Qy 143 KQNTVCT		Query Match Best Local Similarity Matches 114; Conse	RESULT 1 ID 019131 AC 019131; DT 01-JAN-1998 (TREMBLREL. DT 01-JAN-1998 (TREMBLREL. DT 01-JAN-1998 (TREMBLREL. DT 01-JAN-1998 (TREMBLREL.) DT TUMOR NECROSIS FACTOR-RI GN TNF-RI GN TAWRUS (BOVINE). OC EUKARYOTA: METAZOA: CHOI OC EUTHERIA; ARTIODACTYLA. RN [1] RP SEQUENCE FROM N.A. RR LEE EK., TALYOR M.J., RA LEE E.
(TREMBLREL. 02, CREATED) (TREMBLREL. 02, LAST SEQUENCE UPDATE)	PRELIMINARY; PRT; 180 AA.	SCSRCRDEMFQVEISPCVVDRDTVCGCRKNQYREYWGETGFRCLNCSLCPNGTVNIPCQE 160    :         :	KCHKGTYLYNDCPGPGRDTDCRVCAPGTYTALENHLRRCL 100	h 43.9%; Score 959; DB 4; Length 471; Similarity 66.7%; Pred. No. 7.07e-219; 114; Conservative 28; Mismatches 28; Indels 1; Gaps 1;	O19131 PRELIMINARY; PRT; 471 AA. O19131; O1-JAN-1998 (TREMBLREL. O5, CREATED) O1-JAN-1998 (TREMBLREL. O5, LAST SEQUENCE UPDATE) O1-JAN-1998 (TREMBLREL. O5, LAST SEQUENCE UPDATE) TUMOR NECROSIS FACTOR-RECEPTOR I. SOS TAURUS (BOVINE). EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA; EUTHBERIA; ARTIODACTYLA. [1] FISUBLATA; SEQUENCE FROM N.A. [1] LEE EK., TALYOR M.J., KEHRLI M.E.; SUBMITTED (AUG-1997) TO EMBL/GENBANK/DDBJ DATA BANKS. SUBMITTED (AUG-1997) TO EMBL/GENBANK/DDBJ DATA BANKS. PROSITE; PSO0652; TNFR_NGFR_1; 3. SEQUENCE 471 AA; 51368 MW; 1D60FF4A CRC32;

```
Ş
                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SO DREAD OCCUPANT
    급급급증
                                                       RESULT 4
ID Q90287
                                                                                                                          밁
                                                                                                                                                                   밁
                                                                                                                                                                                                                                      STIRE RRECOSE DITE
                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 3
ID Q90286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                         Query Match 20.8%;
Best Local Similarity 72.0%;
Matches 59; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
  Q90287;
01-NOV-1996
01-NOV-1996
01-NOV-1996
                                                                                                                                                                                                                                                                                                                       090286;
01-NOV-1996 (TREMBLREL. 01, CREATED)
01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
01-NOV-1996 (TREMBLREL. 01, LAST ANNOTATION UPDATE)
60NADOTROPIN ALPHA SUBUNIT (FRAGMENT).
CARASSIUS AURATUS (GOLDFISH).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; PISCES; GNATHOSTOMATA;
OSTEICHTHYES; ACTINOPTERYGII; CYPRINIFORMES.
                                                                                                                                                                                                                                               NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DUTHIE S., NASIR L., ECKERSALL P.D.;
SUBMITTED (OCT-1996) TO EMBL/GENBANK/DDBJ
EMBL; U72344; G1613880; -
PROSITE; PS00652; TNER_NGFR_1; 3.
                                                                                                                                                                                                                                                                    KOBAYASHI M., KATO Y., YOSHIURA Y., AIDA K.;
SUBMITTED (AUG-1996) TO EMBL/GENBANK/DDBJ DATA BANKS
EMBL; D86551; G1469836; ..
                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FELIS SILVESTRIS CATUS (CAT).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EUTHERIA; CARNIVORA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TNFR-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPD
TUMOUR NECROSIS FACTOR RECEPTOR P60 (FRAGMENT).
                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                               199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    146 TVCTCHAGFFLRENEC
                                                                                                     259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        165 TVCTCHAGFFLRGNEC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                          87
                                                                                                                                                                    27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98
                                                                                                                                           KRVLV-NDVRLVNHTDCHCSTC
                                                                                                    NRVTVMGGFKVENHTACHCSTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCTLCLNGTVHLSCQEKQN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KCRKEMYQVEISPCTVYRDTVCGCRKNQYRYYWSETHFQCLNCSLCLNGTVQISCKETQN 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    h 43.2%;
Similarity 85.3%;
116; Conservative
                                                                                                                                                                                                                                   107
107 AA;
 (TREMBLREL.
(TREMBLREL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                       PRELIMINARY;
                                                                                                                                                                                                                                   107
11959 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20399 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     161
 ,
,
,
,
CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
                                                                                                                       107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 943; DB 4; L
Pred. No. 1.42e-214;
                                                                                                                                                                                       Score 453; DB 12;
Pred. No. 3.04e-85;
7; Mismatches 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LAST ANNOTATION UPDATE)
                                                                                                   280
                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                    880C6840 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5452A6B2 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches 10;
                                                       108
                                                                                                                                                                                                                                                                                                                                                                                                                          107
                                                       ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DATA BANKS
                                                                                                                                                                                         15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 180;
                                                                                                                                                                                                             Length 107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                         Indels
                                                                                                                                                                                       ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
Ş
 RRCC SETTIA
                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                     SORREAR ROCCEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SETTER RRECOSE
                                                                                                                                                                     Ħ
                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 5
                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                   Q91371;
01-NOV-1996 (TREMBLREL 01, CREATED)
01-NOV-1996 (TREMBLREL 01, LAST SEQUENCE UPDATE)
01-NOV-1998 (TREMBLREL 05, LAST ANNOTATION UPDATE)
01-JAN-1998 (TREMBLREL 05, LAST ANNOTATION UPDATE)
GONADOTROPHIN ALPHA 2 SUBUNIT.
ONCORHYNCHUS MASOU (CHERRY SALMON) (MASU SALMON).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; PISCES; GNATHOSTOMATA;
OSTEICHTHYES; ACTINOPTERYGII; SALMONIFORMES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q91370;
Q1-NOV-1996 (TREMBLREL. 01, CREATED)
Q1-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
Q1-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
QONADOTROPHIN ALPHA I SUBUNIT.
QONADOTROPHIN ALPHA I SUBUNIT.
ONCORHYNCHUS MASOU (CHERRY SALMON) (MASU SALMON).
EUKARYOTA: METAZOA; CHORDATA; VERTEBRATA; PISCES; GNATHOSTOMATA;
OSTEICHTHYES; ACTINOPTERYGII; SALMONIFORMES.
                                                                                                                                                                   LT 6
Q91371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GONADOTROPIN ALPHA SUBUNIT (FRAGMENT).
CARASSIUS AURATUS (GOLDFISH).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRA:
OSTEICHTHYES; ACTINOPTERYGII; CYPRINIFY
                                                                                                                                                                                                                                                                                                                                                                                                              GEN K., MARUYAMA O., KATO T., TOMIZAWA K., WAKABAYASHI K., J. MOL. ENDOCRINOL. 11:265-273(1993).

EMBL; S69273; G546258; -.

PROSITE; PS00779; GLYCO_HORMONE_ALPHA_1; 1.

PROSITE; PS00780; GLYCO_HORMONE_ALPHA_2; 1.

SEQUENCE 119 AA; 13131 MW; ZEEF28F4 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.

KOBAYASHI M., KATO Y., YOSHIURA Y., AIDA K.;

KOBAYASHI M., KATO Y., YOSHIURA Y., AIDA K.;

SUBMITTED (AUG-1996) TO EMBL/GENBANK/DDBJ DATA

EMBL; D86552; G1469838; -.
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                   259
                                                                                                                                                                                                                                                                                          19 GCPECTLQENPFESQPGAPILQCMGCCFSRAYPTPLRSKKIMLVQKNVTSESTCCVAKSY 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     199
                                                                                                                                                                                                                            94 ERV-VVDNIKLINHTECWCNTCYHHKS 119
:|| |: :|: || | |:|!| |||
259 NRVTVMGGFKVENHTACHCSTCYYHKS 285
                                                                                                                                                                                                                                                                                                                        34 GCEECKLKENKLFSNPGAPVYQCTGCCFSRAYPTPLQSKKAMLVPKNITSEATCCVAKEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          88 KRVLV-DDVKLVNHTDCHCSTC 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28 GCEECKLKENNIFSKPGAPVYQCMGCCFSRAYPTPLRSKXTMLVPKDITSEATCCVAKEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NRVTVMGGFKVENHTACHCSTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSY 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20.8%;
Similarity 72.0%;
59; Conservation
                                                                                                                                                                                                                                                                                                                                                     h 20.7%;
Similarity 67.8%;
59; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          108
108 AA;
                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       108
; 12129 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 454; DB 12;
Pred. No. 1.68e-85;
7; Mismatches 15
                                                                                                                                                                                                                                                                                                                                                     Score 452; DB 12; Pred. No. 5.48e-85; 11; Mismatches 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         280
                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERTEBRATA; PISCES; GNATHOSTOMATA; CYPRINIFORMES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B2B1A212 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches 15;
                                                                                                                                                                   114 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                   Length 119;
                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                        1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KATO Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ļ
                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                        93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87
                                                                                                                                                                                                                                                                                                                                                        ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ļ
```

```
RESULT
ID Q
 Ş
                      밁
                                          Ş
                                                                 밁
                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 6
                                                                                                  Query Match
Best Local
                                                                                        Matches
                                                                                                                                            HORMONE; (SIGNAL CHAIN DISULFID DISULFID DISULFID DISULFID DISULFID DISULFID DISULFID CARBOHYD CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE; 94197892.

GEN K., MARUYAMA O., KATO T., TOMIZAWA K., WAKAI J. MOL. ENDOCRINOL. 11:265-273(1993).

EMBL; S69274; G546260; -

PROSITE; PS00779; GLYCO_HORMONE_ALPHA_1; 1.

PROSITE; PS00770; GLYCO_HORMONE_ALPHA_2; 1.

PROSITE; PS00780; GLYCO_HORMONE_ALPHA_2; 1.
                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
TISSUE-PITUITARY GLAND;
                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE-PITUITARY GLAND;
MEDLINE; 96020549.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHAIN) (GTH-ALPHA).
MORONE SAXATILIS (STRIPED BASS)
EUKARYOTA; METAZOA; CHORDATA; V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GLYCOPROTEIN HORMONES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-NOV-1996 (TREMBLREL.
01-NOV-1996 (TREMBLREL.
01-JAN-1998 (TREMBLREL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q91119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q91119
                                                                                                                                                                                                                                                                         PROSITE;
                                                                                                                                                                                                                                                                                                                                 SUBMITTED
                                                                                                                                                                                                                                                                                                <del>'</del>
                                                                                                                                                                                                                                                                                                                                                                                                   HASSIN S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         OSTEICHTHYES;
                                                                                                                                                                                                                                                            PROSITE;
 258
                                                                                                                                                                                                                                                                                                                                                                                                                                   EQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            171 LECTKLSLPQIENVKGTEDSGTTAGAAPGCPECTLQENPFFSQPGAPILQCMGCCFSRAY
                                            199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    231
                      92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
mes 67; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 LKSTGLSLILSALLVIADSYPNSDKTNMGCEECTLKPNTIF--PN--IIQCTGCCFSRAY 59
                                                                                                                                                                                                                                                        SUBUNIT: HETERODIMER OF AN ALPHA AND A BETA CHAIN (BY SIMILARITY).
L; L35071; G2322657; -.
SITE: PS00779; GLYCO_HORMONE_ALPHA_1; 1.
SITE: PS00780; GLYCO_HORMONE_ALPHA_2; 1.
                                                                                                                                                                                                                                                                                                                  MITTED (AUG-1997) TO EMBL/GENBANK/DDBJ DATA BANKS. FUNCTION: INVOLVED IN GAMETOGENESIS AND STEROIDOGENSIS
                                                                                                                                                                                                                                                                                                          SIMILARITY).
YNRVTVMGGFKVENHTACHCSTCYYHK
                                                    GCEECTLRKNSVFSR-DRPVYQCMGCCFSRAYPTPLKAMKTMTIPKNITSEATCCVAKHS 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PTPLRSKKTMLVQKNVTSESTCCVAKSYNRVTVMGGFKVENHTACHCSTCYYHKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PTPLRSKQTMLVPKNITSEATCCVAKEGERVTTKDGFPVTNHTECHCSTCYYHKS 114
           YE-TEV-AGIKVRNHTDCHCSTCYFHK 116
                                          GCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAK-S
                                                                                     h 19.8%;
Similarity 65.5%;
57; Conservative
                                                                                                                                                                                                                                                                                                                                                                                      ENDOCRINOL. 15:23-35(1995).
                                                                                                                                                                                                                                                GLYCOPROTEIN;
                                                                                                                                                                                                                                                                                                                                                                                               ELIZUR A., ZOHAR Y.;
                                                                                                                                  24
34
37
37
54
58
58
78
103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                       fazoa; CHORDATA;
ACTINOPTERYGII;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                              117
57
86
107
109
112
78
103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20.5%;
                                                                                                                                   13066 MW;
                                                                                                                                                                                                                                                 SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01,
01,
                                                                                                                                         GLYCOPROTEIN HORMONES A
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CREATED)

LAST SEQUENCE UPDATE)

LAST ANNOTATION UPDATE)

CHAIN PRECURSOR (GONADO
                                                                                      Score
Pred.
14; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 448; DB 12;
Pred. No. 5.78e-84;
                                                                                                                                                                                                                                      BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PERCIFORMES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERTEBRATA;
                                                                                                                                  CAFB9D0C CRC32;
                                                                                    re 433; DB 12; L
1. No. 3.90e-80;
Mismatches 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PISCES;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WAKABAYASHI K., KATO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (GONADOTROPIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 114;
                                                                                                          Length 117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GNATHOSTOMATA
                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                          ALPHA CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ALPHA
                                                                                                                                                                                                                                                                                                                   (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۲.,
                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
```

```
δ
                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
ID Q
QУ
                                           밁
                                                                                                                          밁
                                                                                                                                                                                                             용
                                                                                                                                                                                                                                                                                                                                                                                                                                                RAP OC OS OF THE PROPERTY OF T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 9
ID 014866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-JAN-1998 (
01-JAN-1998 (
01-JAN-1998 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                062589;
01-NOV-1996 (TREMBLREL. 01, CREATED)
01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
ALPHA SUBUNIT OF GLYCOPROTEIN HORMONES (FRAGMENT).
PHODOPUS SUNGORUS (STRIPED HAIRY-FOOTED HAMSTER) (D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q62589
                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                 SUBMITTED (SEP-1997) TO EMBL/GENBANK/DDBJ EMBL; AF026071; G2570833; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                            SALLES G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                              WARZOCHA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOLUBLE DEATH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BOCKMANN J., BOCKERS T.M., VENNEMANN B., WITTKOWSKI W., SABEL B., KREUTZ M.R.; ENDOCRINOLOGY 137:1804-1813(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE-PITUITARY;
MEDLINE; 96198779.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EUKARYOTA;
                                                                                                                                                                                                                                                                                                                                                             PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EUTHERIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              231
  120
                                         129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EQUENCE FROM N.A.
                                                                                                                                                                                                                                           Local Similarity 31.8%; les 57; Conservation
                                                                                   62
                                                                                                                                                                                       69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                   ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCLVCPQDTFLAWENHHNSECARCQACDEQASQVALENCSAVADTRCGCKPGWFVECQVS 128
                                                                                                                                                               TSLLLAFGLLCLPWLQEGSADSVCP-QGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDT
  ENLFQC-FNCTLCLN-
                                       QCVSSSPFYCQPCLDCGALHRHTRLLC-SRRDTDCGTCLPGFYEHGDGCVSCPTPPPSL
                                                                                DCRECESGSFTASENHLR-HCLSCSKCRKEMGQVEISSCTVDRDTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         x90776;
                                                                                                                                                                                                                                                                                                                                   026071; G2570833; -.
PS00652; TNFR_NGFR_1;
277 AA; 29111 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                          K., RIBEIRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  METAZOA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TREMBLREL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TREMBLREL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E195654;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6047 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHORDATA; VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                ъ.
,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 BETA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05,
                                                                                                                                                                                                                                                                                                                                                                                                                                            RENARD N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDAT
                                                                                                                                                                                                                                                  Score 249; DB 2;
Pred. No. 1.12e-34;
31; Mismatches 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score
Pred.
-LSCQEKONTVC-TCHAGFFLRENECVSCSNCKKSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ς,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E5AAE0F8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                     2.
06E165C7 CRC32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  334; DB 10;
No. 2.97e-55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                CHARLOT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NIKLOWITZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ą
                                                                                                                                                                                                                                                                                                                                                                                                       DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TETRAPODA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TETRAPODA;
                                                                                                                                                                                                                                                                                                                                                                                                                                            c.,
                                                                                                                                                                                                                                                  76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UPDATE)
                                                                                                                                                                                                                                                                                            Length 277;
                                                                                                                                                                                                                                                                                                                                                                                                       BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                COIFFIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (DJUNGARIAN HAMSTER).
                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۳.
۲.
                                                                              CGCRKNQYRHYW-S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MULLER
                                                                                                                                                                                                                                                                                                                                                                                                                                              в.,
                                                                                                                                                                                                                                                    15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                  Gaps
                                         186
                                                                                                                                                               61
                                                                                                                                                                                                        68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

RESULT ID 0

O14865

PRELIMINARY;

PRT;

426

B

```
RESULT
ID 0
 Ş
                            밁
                                               δÃ
                                                                             문
                                                                                                      δÃ
                                                                                                                                                                                                              SOR RAP OCCUPANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SORRER ROCCOS
                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 5
                                                                                                                                                        Query Match
Best Local Similarity
Matches 55; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           014865;
01-JAN-1998
01-JAN-1998
01-JAN-1998
                                                                                                                                                                                                                                                                                                                         O00276;
O1-JUL-1997 (TREMBLREL. 04, CREATED)
O1-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
O1-JUL-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
LYMPHOCYTE ASSOCIATED RECEPTOR OF DEATH 2.
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                     LT 11
000276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUBMITTED (SEP-1997) TO EMBL/GE EMBL; AF026070; G2570831; -. PROSITE; PS00652; TNFR_NGFR_1; SEQUENCE 426 AA; 45950 MW;
                                                                                                                                                                                                            SUBMITTED (MAY-1997) TO EMBL/GENBANK/DDBJ DATA BANKS.
EMBL; U94503; G2071953; -.
PROSITE; B800652; THFR.MGFR.1; 2.
SEQUENCE 253 AA; 26934 MW; A21C863E CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JAN-1998 (TREMBLREL.
01-JAN-1998 (TREMBLREL.
01-JAN-1998 (TREMBLREL.
DEATH RECEPTOR 3 BETA.
                                                                                                                                                                                                                                                                            SCREATON G., XU X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EUKARYOTA; METAZOA;
EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                                    EUTHERIA; PRIMATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SALLES G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HOMO SAPIENS (HUMAN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                            129
    120
                                                      62
                                                                              69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             62
                                                                                                                                  13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13 AALLLV--LLG-ARAQGGTRSPRCDCAGDF-HKKIGLFCCRGCPAGHYLKAPCTEPCGNS :: | | | | | | | | | | | | ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               w
                                                                                                      TSLLLAFGLLCLPWLQEGSADSVCP-QGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDT
                                                                                                                         AALLLV--LLG-ARAQGGTRSPRCDCAGDF-HKKIGLFCCRGCPAGHYLKAPCTEPCGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QCVSSSPFYCQPCLDCGALHRHTRLLC-SRRDTDCGTCLPGFYEHGDGCVSCPTPPPSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DCRECESGSFTASENHLR-HCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYW-S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCLVCPQDTFLAWENHHNSECARCQACDEQASQVALENCSAVADTRCGCKPGWFVECQVS 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TSLLLAFGLLCLPWLQEGSADSVCP-QGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDT
                       QCVSSSPFYCQPCLDCGALHRHTRLLC-SRRDTDCGTCLPGFYEHGDGCVSCP 180
                                                   DCRECESGSFTASENHLR-HCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYW-S
                                                                          TCLVCPQDTFLAWENHHNSECARCQACDEQASQVALENCSAVADTRCGCKPGWFVECQVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  h 11.4%;
Similarity 31.8%;
57; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   K., RIBEIRO
                                                                                                                                                         11.3%;
larity 31.8%;
Conservative
                                                                                                                                                                                                                                                                             x. N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P., RENARD N.,
                                                                                                                                                                                                                                                                            OLSEN A., COWPER A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          %
%
%
%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL/GENBANK/DDBJ DATA
                                                                                                                                                        Score 247; DB 2; L
Pred. No. 3.31e-34;
31; Mismatches 72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 249; DB 2;
Pred. No. 1.12e-34;
31; Mismatches 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
-LSCQEKQNTVC-TCHAGFFLRENECVSCS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2.
87E00821 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches 76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHARLOT C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                     253
                                                                                                                                                                                                                                                                                                                                                                                                                                     ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                          TAN R., MCMICHAEL
                                                                                                                                                                                  Length 253;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 426;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COIFFIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₽.
                                                                                                                                                         15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15;
                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                      61
                                                                                                                               83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83
```

```
δõ
                                                                             ₽
                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
Ş
                           밁
                                                                                                                                  밁
                                                                                                                                                                                                                   SOR RAP OCCUPANT
                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 13
ID 000275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOR RAPROCOS DITIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 12
ID 000280
                                                                                                                                                             Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      000280;
01-JUL-1997 (TREMBLREL. 04, CREATED)
01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDAT
LYMPHOCYTE ASSOCIATED RECEPTOR OF DEATH 9.
HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPC
                                                                                                                                                                                                                                                                                                                                                                           000275;
01-JUL-1997 (TREMBLREL.
01-JUL-1997 (TREMBLREL.
01-JAN-1998 (TREMBLREL.
                                                                                                                                                                                                                SUBMITTED (MAY-1997) TO EMBL/GENBANK/DDBJ
EMBL; U94502; G2071951; -.
PROSITE: PS00652; TWER_MCRR_1; 2.
SEQUENCE 418 AA; 45456 MW; 3D04954A CH
                                                                                                                                                                                                                                                                                                                                       LYMPHOCYTE ASSOCIATED RECEPTOR OF DEATH HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBMITTED (MAY-1997) TO EMBL/GENBANK/DDBJ DATA EMBL; U794510; G2071967; -. PROSITE: P800652; TWER_MEER_1; 2. SEQUENCE 380 AA; 41192 MW; 17C92A14 CRC32;
                                                                                                                                                                                                                                                                        BELL J.;
                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
SCREATON G., XU X.N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BELL J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SCREATON G., XU X.N.,
                                                                                                                                                                                                                                                                                                                          EUTHERIA; PRIMATES.
 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  y Match 11.3%;
Local Similarity 31.8%;
hes 55; Conservative
                                                                                                                       62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13 AALLLY--LLG-ARAQGGTRSPRCDCAGDF-HKKIGLFCCRGCPAGHYLKAPCTEPCGNS
                                                                                                         ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3 TSLLLAFGLLCLPWLQEGSADSVCP-QGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENLFQC-FNCTLCLN-GTVH----LSCQEKQNTVC-TCHAGFELRENECVSCS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DCRECESGSFTASENHLR-HCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYW-S
ENLFQC-FNCTLCLN-GTVH----LSCQEKQNTVC-TCHAGFFLRENECVSCS
                                                   DCRECESGSFTASENHLR-HCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQVRHYW-S
                                                                             TCLVCPQDTFLAWENHHNSECARCQACDEQASQVALENCSAVADTRCGCKPGWFVECQVS 128
                                                                                                        TSLLLAFGLLCLPWLQEGSADSVCP-QGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCLVCPQDTFLAWENHHNSECARCQACDEQASQVALENCSAVADTRCGCKPGWFVECQVS 128
                         QCVSSSPFYCOPCLDCGALHRHTRLLC-SRRDTDCGTCLPGFYEHGDGCVSCP 180
                                                                                                                                                           h 11.3%;
Similarity 31.8%;
55; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                       CHORDATA; VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OLSEN A.,
                                                                                                                                                                                                                                                                                  OLSEN A.,
                                                                                                                                                                                                                                                                                                                                                                            04, CREATED)
04, LAST SEQUENCE UPDATE)
05, LAST ANNOTATION UPDATE)
                                                                                                                                                           Score 247; DB 2; L. Pred. No. 3.31e-34; 31; Mismatches 72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 247; DB 2; Le
Pred. No. 3.31e-34;
31; Mismatches 72;
                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                               2.
3D04954A CRC32;
                                                                                                                                                                                                                                                                                COWPER A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COWPER A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                               418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   380
                                                                                                                                                                                                                                                                                                                                                                                                                                               ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₹
                                                                                                                                                                                                                                                         DATA
                                                                                                                                                                                                                                                                                                                                        TETRAPODA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TETRAPODA;
                                                                                                                                                                                                                                                                                   TAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  UPDATE)
                                                                                                                                                                                                                                                                                   ₽.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₽.
                                                                                                                                                                                      Length 418;
                                                                                                                                                                                                                                                         BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BANKS
                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15;
                                                                                                                                                              <u>1</u>5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                    119
                                                                                                         61
                                                                                                                                  83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
```

```
RESULT
ID Q8
                                                       Š
                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
ş
                              밁
                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 14
ID Q85407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       용
                                                                                                                    Query Match 9.8%;
Best Local Similarity 38.5%;
Matches 30; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 9.8%;
Best Local Similarity 38.5%;
Matches 30; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LT 15
Q89118
                                                                                                                                                                        SEQUENCE FROM N.A.
STRAIN-SOMALIA-1977;
MASSUNG R.E., LOPAREV V.N., KNIGHT J.C., CHIZHIKOV V.E., PARSONS J.M.,
TOTMENIN A.V., SHCHELKUNOV S.N., ESPOSITO J.J.;
SUBMITTED (JUL-1995) TO EMBL/GENBANK/DDBJ DATA BANKS.
EMBL; U1841; G88585; ---
PROSITE; PS00652; TNFR_NGFR_1; 2.
SEQUENCE 349 AA; 38272 MW; OFDCC784 CRC32;
                                                                                                                                                                                                                                                                                                                                01-NOV-1996 (TREMBLREL. 01, CREATED)
01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
SOMALIA-1977 RIGHT NEAR-TERMINAL REGION.
VARIOLA VIRUS.
VARIOLA VIRUS.
VIRIDAE; DS-NOA ENVELOPED VIRUSES; POXVIRIDAE; CHORDOPOXVIRINAE;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Q89118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN-BANGLADESH-1975;

STRAIN-BANGLADESH-1975;

MEDLINE; 94088747.

MASSUNG R.F., ESPOSITO J.J., LIU L.I., QI J., UTTERBACK T.R.,

KNIGHT J.C., AUBIN L., YURAN T.E., PARSONS J.M., LOPAREV V.N.;

KNIGHT 366:748-751(1993).

MATURE 366:748-751(1993).

EMBL; L22579; G439102; -.

PROSITE; PS00652; TNFR_MGFR_1; 2.

PROSITE; PS00652; TNFR_MGFR_1; 2.

SEQUENCE 348 AA; 38075 MW; 2A911AF6 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q85407;
01-NOV-1996 (TREMBLREL. 01, CREATED)
01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
HOMOLOG OF VACCINIA VIRUS CDS B28R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VARIOLA VIRUS.
VIRIDAE; DS-DNA ENVELOPED VIRUSES; POXVIRIDAE; CHORDOPOXVIRINAE;
                                                                                                                                                                                                                                                                                                                        ORTHOPOXVIRUSES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORTHOPOXVIRUSES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
 97
                                                          37
                                                                            40 HNLCCLSCPPGTYASRLCDSKT-NTQCTPCGSGTFTSRNNHLPACLSCNG-RCNSNQVET 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       39
                            98 RSCNTTHNRICECSPGYY 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SSCTVDRDTVCGCRKNQY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEI 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HNLCCLSCPPGTYASRLCDSKT-NTQCTPCGSGTFTSRNNHLPACLSCNG-RCNSNQVET 96
                                                         NSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEI 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RSCNTTHNRICECSPGYY 114
SSCTVDRDTVCGCRKNQY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                    Score 214; DB 11;
Pred. No. 1.52e-26;
14; Mismatches 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 214; DB 11; I
Pred. No. 1.52e-26;
14; Mismatches 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 349 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                               Length 349;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 348;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                    Indels
                                                                                                                    2;
                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                     2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2;
```

Search completed: Wed May Job time: 72 secs.

6 09:00:25 1998

#### THIS PAGE BLANK (USPTO)

arch n	3 3 3 3	
Derich nn na - na databaco coarrà metar emithewaterman algorithm	Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd	

MPsrch\_nn n.a. Wed May 6 14:22:01 1998; MasPar time 1326.51 Seconds 1499.916 Million cell updates/sec n.a. database search, using Smith-Waterman algorithm

Description:
Perfect Score:
N.A. Sequence:
Comp: >US-08-804-166-7
(1-1301) from US08804166.seq
1301
1 CTCGAGATGGCTACAGGTAA......CACAATAAGGATCCCTCGAG 1301
GAGCTCTACCGATGTCCATT......GTGTTATTCCTAGGGAGCTC

Tabular output not generated.

Searched: Nmatch STD : Dbase 0; Query 0 TABLE default Gap 6

Scoring table:

Post-processing: Minimum Match 0% Listing first 45 summaries 436399 seqs, 764661465 bases x 2

Database:

Database:

emb153
1:em\_in 2:em\_or 3:em\_om 4:em\_ov 5:em\_pl 6:em\_htg
1:em\_hum1 8:em\_hum2 9:em\_ba 10:em\_ro 11:em\_un 12:em\_vi
13:em\_pat
genbank105
14:gb\_ro 15:gb\_om 16:gb\_ov 17:gb\_in 18:gb\_pl 19:gb\_ba
20:gb\_st 21:gb\_v1 22:gb\_ph 23:gb\_sy 24:gb\_un 25:gb\_pat
26:gb\_htg 27:gb\_pr1 28:gb\_pr2

Statistics: Mean 11.236; Variance 5.267; scale 2.134

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

1 3 3 5 5 6 6 7 7 8 8 11 11 11 11 11 11 11 11 11 11 11 11	Result
514 514 514 514 514 514 514 514 514	Score
	Query Match
	Length
225 225 225 225 225 225 225 225 225 225	DB
A29103 A29098 ADMINERP A21522 I43805 HUMINER A26412 HUMINERB HUMIN	ID
H. sapiens mRNA for TNF- Synthetic DNA for TNF- Human tumor necrosis f TNF alpha gene. Sequence 24 from paten Human tumor necrosis f cDNA for (55kD TNF-BP) Homo sapiens tumor nec Human tumor necrosis f H. sapiens TNF-R mRNA f Sequence 1 from patent Synthetic nucleotide s Sequence 2 from patent	Description
0.00e+00 0.00e+00 0.00e+00 0.00e+00 0.00e+00 0.00e+00 0.00e+00 0.00e+00 0.00e+00 0.00e+00 0.00e+00 0.00e+00 0.00e+00 0.00e+00	Pred. No.

	» # Л #		4.2	41	40	39	38	37	36	35 5	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	
	) A () A	7 2 2	303	303	304	304	304	305	307	312	312	312	314	313	332	336	354	354	372	372	374	381	383	383	420	474	478	477	483	507	
	0 9	> :-	٠.	23.3	ω	Ψ	'n	23.4	Ψ			٠.	.~	24.1	5	.5	.7	.7	œ		ω.	9	9	9	2				.7	39.0	
		3136					1964																							2061	
ć	ν. Υ.	7 7	) N	27	25	27	27	25	15	27	27	27	27	15	27	27	25	25	25	<u>ک</u>	25	25	25	25	27	25	25	25	25	25	
20000	A SUCCE SALINES	LOR4//	163120	HUMGHN	I41411	HUMGH	HSGROW2	102855	SSU19994	HSCG01	HUMCGBEL03	HUMCGBBA3	HSGG02	FCU72344	HUMGHCSA	BABBCGA	I43809	A20259	I43787	A20253	A20254	I43786	A20713	I43813	HUMCGB	I43808	A20257	A21525	A29099	A20255	
פלוונוופנדנ וומנדפטנדמפ פ	10010015 100 100 100 100 100 100 100 100	-	Sequence 3 from parent	, W	Sequence 5 from patent	┍	Human germ line gene f	Sequence 1 from Patent				Human chorionic gonado	Human chorionic gonado	Felis catus tumour nec	Human growth hormone (	ţa.		ucleo		Synthetic nucleotide 5	c nucled	Sequence 1 from patent	5	Sequence 56 from paten	Human chorionic gonado	Sequence 47 from paten	Synthetic nucleotide s	oligonucleotide probe.	netic DNA 1	55kD receptor gene for	
	מפל	.906-21	. 486	٠.	.16e-	.16e-2	.16e-	.04e-2	6-2	.22e-2	.22e	. 22e	.60e	2.83e-242	.71	•	. 88	. 88	3.19e-295	.13	5.06e-297	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	

### ALIGNMENTS

Db 453 Qy 465	Db 393 Qy 405	Db 333 Qy 345	Query Ma Best Loc Matches	BASE COUNT	source	FEATURES	JOURNAL	AUTHORS	REFERENCE	SOURCE	DEFINITION ACCESSION NID	RESULT LOCUS
TGCAGGGAGTGTGAGAGCGG	AAGTGCCACAAAGGAACCTP 	GATAGTGTGTGTCCCCAAGG	Query Match 39.5%; Best Local Similarity 100.0%; Matches 514; Conservative	298 a		BOEHRINGER INGELHE	Patent: EP 0393438	Hauptmann, R., Himm	vertebrata; Eutheria 1 (bases 1 to 1331)	human. Homo sapiens Eukaryotae;	H.sapiens A29103 g1247517	1 A29103 1331 bp
TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC	AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 	GATAGTGTGTGTCCCCAAGGAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 	Score 514; DB 25; Pred. No. 0.00e+00; 0; Mismatches \ 0;	/organism="Homo sapiens" /db_xref="taxon:9606" 407 c 343 g 283 t	K	BOEHRINGER INGELHEIM INTERNATIONAL G.M.B.H	Patent: EP 0393438-A 53 24-OCT-1990;	Hauptmann, R., Himmler, A., Maurer-Fogy, I. and	Eutheria; Frimates; Catarrhini; Hominidae; Homo. to 1331)	s mitochondrial eukaryotes; Metazoa; Chordata	mRNA for TNF-binding polypeptide from patent	bp DNA PAT
CTCAGACACTGCCTC 512	GGCAGGATACGGAC 452	rcgartrgcrgracc 392                 rcgartrgcrgracc 404	Length 1331; Indels 0; Gaps 0;				Soring cheretor	d Stratowa,C.	HOminidae; Homo.	oa; Chordata;	from patent EP0393438.	03-JUL-1995

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
SOURCE
ORGANISM
            용
                                Ş
                                               밁
                                                                      Ş
                                                                                                밁
                                                                                                                    δÃ
                                                                                                                                             Š
                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     გ
                                                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                  source
                                                                             465
                                                                                                                        405
                                                                                                                                                               825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     585
            361
                                  525
                                                      301
                                                                                                 241
                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     513
                              TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 300
                                                                                                                                AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG 812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCCAGTGCTTCAATTGCAGCCTCTGCCTCCAATGGGACCGTGCACCTCTCCTGCCAGGAG 692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                         AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGACACCGTGTGGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC 584
514;
                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 1368)
Hauptmann, R., Himmler, A., Maurer-Fogy, I. and Stratowa, C.
TNF-receptor, TNF-binding protein and DNA coding therefor
Patent: EP 0393438-A 48 24-OCT-1990;
BOEHRINGER INGELHEIM INTERNATIONAL G.M.B.H
                                                                                                                                                                                                                                                                                                                                                                                                                      unidentified unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic
                                                                                                                                                                                                           h 39.5%;
Similarity 100.0%;
514; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                          unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                     g1248892
                                                                                                                                                                                                                                                                   293
                                                                                                                                                                                                                                                                   ø
                                                                                                                                                                                                                                                                 /organism="artificial sequence"
/db_xref="taxon:29278"
424 c 375 g 276 t
                                                                                                                                                                                                                                                                                                         /organism="unidentified"
/db_xref="taxon:32644"
                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA for
                                                                                                                                                                                                                                                                                                                                .1368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TNF-receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              đ
                                                                                                                                                                                                                      Score 514; DB 25; Pred. No. 0.00e+00;
                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         patent EP0393438.
                                                                                                                                                                                                                                Length 1368;
                                                                                                                                                                                                           Indels
                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         632
                                                                           524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    572
                                                                                                                      464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   644
                                                                                                                                                                                                           0;
```

```
JOURNAL
MEDLINE
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       묽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                   밁
                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                          Query Match 39.5%;
Best Local Similarity 100.0%;
Matches 514; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                 mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sig_peptide
                                   275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                585
GATAGTGTGTGTCCCCAAGGAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAACAGAACACCGTGTGCACCTGCCATGCAGGTTTCTTAAGAGAAAACGAGTGTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TICCAGIGCTICAATIGCAGCCICTGCCICAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryotae; mitochondrial eukaryotas; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 2050)
Gray, P.W., Barrett, K.J., Chantry, D., Turner, M. and Feldman, M. Cloning of human tumor necrosis factor (TNF) receptor cDNA and expression of recombinant soluble TNF-binding protein Proc. Natl. Acad. Sci. U.S.A. 87, 7380-7384 (1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Draft entry and computer-readable sequence for [Proc. Sci. U.S.A. (1990) In press] kindly submitted by P.W.Gray, 13-AUG-1990.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human tumor necrosis factor receptor(TNF) mRNA, complete cd. M60275 M37764 g339759
TNF receptor; transmembrane receptor; tumor necrosis factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human placenta,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              receptor
                                                                                                                                                                                                                                                       429
                                                                                                                                                                                                                                                       ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product="INF receptor"
//db_xref="pine raceptor"
//db_xref="pine race
                                                                                                                                                                                                                                                                                                                 /gene="TNF
275. .1513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="placenta"
155. .274
                                                                                                                                                                                                                                                       /product="TNF receptor"
611 c 566 g 4
                                                                                                                                                                                                                                                                                                                                                                                                                                            GRCLREAQYSMLATWRRRTRREATLELLGRVLRDMDLLGCLEDIEEALCAPPLPPAPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="TNF receptor"
155. .1516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            đđ
                                                                                                                                                                                                                                                                                                                                           receptor"
                                                                                          Score 514; DB 27;
Pred. No. 0.00e+00;
0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA
                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                       444 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          858
                                                                                                0
                                                                                                                                                       Length 2050;
                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complete cds.
                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Natl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Acad
```

```
REFERENCE
AUTHORS
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
LOCUS
                                                 BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                           Sgo
                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAACAGAACACCGTGTGCACCTGCCATGCAGGTTTCTTAAGAGAAAACGAGTGTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATAGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TNF alpha
A21522
g579599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; H
1 (bases 1 to 2062)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A21522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               မ္မ
                                                                          ø
                                                                                                                                /db_xref="pii:g579600"
/db_xref="pii:g579600"
/db_xref="sniss-prot:p19438"
                                                                       PSLLR"
a 617
                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/db_xref="taxon:9606"
155. .1522
                                                                                                                      GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPP?
                                                                                                                                                                                                                                                                                                                                                       /gene="INF alpha gene"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                         /gene="TNF alpha gene"
155. .1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2246569-A 1 05-FEB-1992;
    39
    .58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ф
    Score
                                                                       573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNA
                                                                     g
    514;
                                                                       443
  DB
  25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT
Length 2062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        404
```

```
BASE COUNT
ORIGIN
                                                                                                                                                                REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
               Ş
                                                    Qy
                                                                                                                                                                                                                                                                                          RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
밁
                                    밁
                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                       밁
                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                      GIN
                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 100.0%; Matches 514; Conservative
                                                                                          Matches
                                                                                                  Query Match
Best Local (
                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                          source
                                                    645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  405
                                    335
                                                                                                                                                                                                                                                                                                                               825
                                                                                                                                                                                                                                                                                                                                                                                      695
                                                                                                                                                                                                                                                                                                                                                                                                                          635
                                                                                                                                                                                                                                                                                                                                                                                                                                                               575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                405
395
                                                                                                                                                                                                                                                                                                                                                                    765
                                                                                                                                                                                                                                                                                                                                                                                                        705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         455
                                                                                                                                                                                                                                                                                                                                                755
                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                 AATGTTAAGGGCACTGAGGACTCAGGCACCACAG 788
                                                                                                                                                                                                                                                                                                                                                                           TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCCTACCCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 394
TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                   s
                                                                                                                                                                                                                                                                                                                                                                  TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 394
                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
I43805
                                                                                          514;
                                                                                                                                                                1 (bases 1 to 2062)
1 (bases 1 to 2062)
Feldmann, M., Gray, P.W., Turner, M.J.C. and Brennan, F.M.
TNF.alpha. receptor derived binding protein
Patent: US 5633145-A 24 27-MAY-1997;
Location/Qualifiers
                                                                                                                                                                                                                          Unknown
                                                                                                                                                                                                                                   Unknown
                                                                                                                                                                                                                                                     g2468903
                                                                                                                                                                                                                                                                                          I43805
                                                                                      n 39.5%;
Similarity 100.0%;
514; Conservative
                                                                                                                                                                                                                Unclassified
                                                                                                                                        429
                                                                                                                                       ģ
                                                                                                                                                                                                                                                                        24
                                                                                                                                     /organism="unknown"
617 c 573 g
                                                                                                                                                                                                                                                                        from
                                                                                                                                                                                                                                                                        patent US 5633145
                                                                                                                                                                                                                                                                                          ģ
                                                                                                  Score 514; DB 25;
Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        O; Mismatches 0
                                                                                         0;
                                                                                          Mismatches
                                                                                                                                       443
                                                                                                                                       H
                                                                                          0
                                                                                                                                                                                                                                                                                          PAT
                                                                                                          Length 2062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                    824
                                                                                                                                                                                                                                                                                                                                                                                     754
                                                                                                                                                                                                                                                                                                                                                                                                                         694
                                                                                                                                                                                                                                                                                                                                                                                                                                            704
                                                                                                                                                                                                                                                                                                                                                                                                                                                              634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            454
                                                                                                                                                                                                                                                                                                                                                                                                       764
                                                                                          0
```

```
JOURNAL
MEDLINE
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                           BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NID
                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                Query Match 39.5%;
Best Local Similarity 100.0%;
Matches 514; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGACACCGTGTGTGGGTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATGTTAAGGGCACTGAGGACTCAGGCACCACAG 788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 2087)
Schall, T.J., Lewis, M., Koller, K.J., Lee, A.L., Rice, G.C., Won Gatanaga, T., Granger, G.A., Lentz, R., Raab, H., Kohr, W.J. and
                                                                                                                                                                                                                                                                                                                                                           ьy
                                                                                                                                                                                                                                                                                                                                                                                          Cell 61, 361-370 (1990)
90235285
                                                                                                                                                                                                                                                                                                                                                                            Draft
                                                                                                                                                                                                                                                                                                                                                                                                                     necrosis factor
                                                                                                                                                                                                                                                                                                                                                                                                                                  Molecular cloning and expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goeddel, D. V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cell surface receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g339744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human
                                                                                          433
                                                                                                                                                                                                                                                                                                                                                           t entry and computer-readable.
Schall, 26-MAR-1990.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   placenta,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tumor
                                                                                          9
                                                                                                                               /codon_start=1
/db_xref="pid:g339745"
/db_xref="pid:g339745"
/db_xref="pid:g339745"
/db_xref="pid:g339745"
/translation="MGLSTVPDLLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
PQGKYIHPQNNSICCTKCHKGTYLYNDCPGPQDTDCRECESGSFTASENHLAHCLSC
SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
KQNTVCTCHAGFFLRENCVSCSNCKKSLECTKLCLPQIENVGTEDSGTTVLLPLVI
FFGLCLLSLEJGIAWTNYQRWKSKLYSIVCGKSTPEKEGELEGTTTKPLAPNPSFSPT
PGFTPTLGFSPVPSSTFTSSSTTTPGDCPNFAAPRRVAPPYQGADPILATALASDPI
PNPLQWEDSAHKPQSLDTDDPATLYAVVENVPPLKKEFVRRLGLSDHEIDRLELON
PNPLQWEDSAHKPQSLDTDDPATLYAVVENVPPLKKEFVRRLGLSDHEIDRLELON
                                                                                                      PSLLR"
                                                                                                                    GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPPA
                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                    /note="tumor necrosis factor receptor"
                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             necrosis factor receptor mRNA, complete cds.
                                                                                        624 c
                                                                                                                                                                                                                                                                                      .1549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            đđ
               Score 514; DB 27;
Pred. No. 0.00e+00;
0; Mismatches 0
                                                                                       581 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tumor necrosis factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA
                                                                                        449 t
                                                                                                                                                                                                                                                                                                                                                                                                                                   of,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    858
                                                                                                                                                                                                                                                                                                                                                                       sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                  ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                  receptor
                0,
                                         Length 2087;
                                                                                                                                                                                                                                                                                                                                                                         for
                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rice, G.C., Wong, G.H., Kohr, W.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                  for
                                                                                                                                                                                                                                                                                                                                                                         [1] kindly submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-NOV-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                   human tumor
                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             824
               0
DASE CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                            AUTHORS
             COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCAGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACATGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATGTTAAGGGCACTGAGGACTCAGGCACCACAG 815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                              l (bases 1 to 2111)
Brockhaus,M., Dembic,Z., G
Schlæger,E.J.
TNF-binding proteins
Patent: EP 0417563-A 24 20
                                                                                                                                                                                                                                                                                Patent:
F. HOFFW
                                                                                                                                                                                                                                                                                                                                                                                                                                              patent
A26412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA for (55kD TNF-BP)
                                                                                                                                                                                                                                                                                                                                                                                       unidentified
                                                                                                                                                                                                                                                                                                                                                                                                    unidentified
                                                                                                                                                                                                                                                                                                                                                                       unclassified
                                                                                                                                                                                                                                                                                  HOFFMANN-LA ROCHE AG
               445
                                                                                                                                                                                                                                                                                                                                                                                                                                                             EP0417563
               œ
                                                    /codon_start=1
/product="55 kD TNF-BP"
/product="55 kD TNF-BP"
/db_xref="pID:9904969"
/translation="MGLSTVPDLLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC
POGKYIHPONNSICCTKCHKGTYLYNDCPGPGODTDCRECESGSFTASENHLHCLSC
SKCRKEMGOVEISSCTVDRDTVCGCRKNOYHYWSENLFQCFWCSLCLNGTVVLLSCQE
KONTVCTCHAGFFLRENCCVSCSNCKKSLECTKLCLPOIENVKGTEDSGTTVLLPVI
KONTVCTCHAGFFLRENCVSCSNCKKSLECTKLCLPOIENVKGTEDSGTTVLLPVI
FOGLOLLSLLEIGLMYRYQHMSKLYSIVCGKSTPKKBGELEGTTTKPLAPNPSFSPT
PGFTPTLGFSPVPSSTFTSSSTYTPGDCPNFAAPRREFVRELGLSDHEIDALELON
DRILGENGWEDSAHKPOSLDTDDPATLYAVVENVPPLKMKEFVRELGSHEIDHEIDALELON
                                         GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPP?
                                                                                                                                                                                                   /note="pid:e161624"
                                                                                                                                                                                                                      /organism="Artificial
187. .1554
                                                                                                                                                                                                                                                                  ocation/Qualifiers
                629
               ი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      đđ
               587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tumor
                                                                                                                                                                                                                                                                                              20-MAR-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                          Gentz, R., Lesslauer, W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            necrosis factor
                                                                                                                                                                                                                                    sequences"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  858
```

PAT

721

764

661

704

601

644

541 524 481 464 421 404 361

584

824 781

binding protein

Loetscher, H. and

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 51
                                                                                                                                                              JOURNAL MEDLINE
                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                            ORGANISM
                                                   CDS
                                                                                    sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                     787
                                                                                                                                                                                                                                                                                                                                                                                                                  825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7 Match 39.5%;
Local Similarity 100.0%;
nes 514; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATGTTAAGGGCACTGAGGACTCAGGCACCACAG 820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 486
                                                                                                                                                                                              Tabuchi,H. and Lesslauer,W. Molecular cloning and expression of the
                                                                                                                                                                                                                      Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; H 1 (bases 1 to 2111)
Loetscher, H., Pan, Y.-C.E., Lahm, H.-W., Gentz, R., Brockha
                                                                                                                                                                                                                                                                                                               M58286 M33480
g339753
                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                      tumor necrosis factor receptor. Human cell line HL60, cDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                       Homo sapiens tumor necrosis factor
                                                                                                                                                                          factor receptor
Cell 61, 351-359
                                                                                                                                                                                                                                                                                                                                                                 HUMTNFRB
                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
/cell_line="HL60"
187. .273
                                                   /product="tumor necrosis 187. .1554
                                     /gene="
                                                                                                                                                 Location/Qualifiers
  /product="tumor necrosis
              /codon_start=
                          /note-"55 kDa
                                                                         /gene-"TNF receptor"
                                      INF receptor"
                                                                                                                                                                          (1990)
                                                                                                                                                                                                                                                                                                                                                              ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 514; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                mRNA
  factor receptor"
                                                              factor
                                                                                                                                                                                                                                                                                                                                      receptor mRNA,
                                                                                                                                                                                                  human 55 kd tumor necrosis
                                                                                                                                                                                                                                                                                                                                                                PRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2111;
                                                                                                                                                                                                                          Brockhaus, M.,
                                                                                                                                                                                                                                                                                                                                      complete cds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                               RESULT
LOCUS
                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                Š
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
              REFERENCE
                                                SOURCE
ORGANISM
                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                               ACCESSION
                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 51
 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          307
                                                                                                                                                                                               787 AATGTTAAGGGCACTGAGGACTCAGGCACCACAG 820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   345
                                                                                                                                                                                                                                                                                                 705
                                                                                                                                                                                                                                                                                                                         667
                                                                                                                                                                                                                                                                                                                                                   645
                                                                                                                                                                                                                                                                                                                                                                         607
                                                                                                                                                                                                                                                                                                                                                                                                    585
                                                                                                                                                                                                                                                                                                                                                                                                                          547
                                                                                                                                                                                                                                                                                                                                                                                                                                                  525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         427
                                                                                                                                                                                                                                                 765
                                                                                                                                                                                                                                                                        727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 366
                                                                                                                                                                                                                                                TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG 786
                                                                                                                                                                                                                                                                                                 TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                              CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCTGCTCCAAATGCCGAAAGGAAATGGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 426
                                                                                                                                                            w
                                                                                                                                                                                                                                                                                                                        AAACAGAACACCGTGTGCACCTGCCATGCAGGTTTCTTCTAAGAGAAAAACGAGTGTGTC 726
                                                                                                                                                                                                                                                                                                                                                                                                    CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   514;
          Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; H
1 (bases 1 to 2112)
                                                                                   g339755
                                                                                             M63121 M75861
Himmler, A., Maurer-Fogy, I., Kroenke, M., Scheurich, P.,
                                                Homo sapiens
                                                            Human cDNA to mRNA.
                                                                                                                      Human tumor necrosis
                                                                                                                                                 HUMTNERC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 h 39.5%;
Similarity 100.0%;
514; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                445
                                                                       necrosis factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="TNF
274. .1551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PSLLR"
                                                                                                                                               2112
                                                                                                                                              ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 514; DB 27;
Pred. No. 0.00e+00;
0; Mismatches 0
                                                                                                                      factor receptor (TNF receptor) mRNA, complete
                                                                      receptor
                                                                                                                                               mRNA
```

30-SEP-1991

764

704 666 644 606 584 546 524 486 464

```
/db_xref="pid:g339754"
//translation="MGLSTVPDLLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVC/
PQGKYIHPQNNSICCTVCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSC
SKCKEMGQVEISSCTVDDTVVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSQQE
KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTTVLLPLVI
FFGLCLLSLLFIGLMYRYQRWKSKLYSIVCGKSTPEKGELEEGTTKFLAPNPSTSPT
GFFTFIGFSVPYPSSTTTSSSTYTPGDCPNFAAPRREVAPPYQGADFILATALASDF
PNPLQKWEDSAHKPQSLDTDDPATLYAVVENVPPLRWKEFVRRLGLSDHEIDRLELQN
GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPPA
```

```
/gene="TNF receptor"
/product="tumor necrosis factor receptor"
629 c 587 g 450 t
                                                                              receptor"
```

0

0,

Gaps

Length 2111; Indels

```
JOURNAL
MEDLINE
FEATURES
                                    밁
                                                                                       Š
                                                                                                                                                   밁
                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ϋ́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 39.5%;
Best Local Similarity 100.0%;
Matches 514; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               345
                                 807
                                                                                                765
                                                                                                                                                   747
                                                                                                                                                                                                            705
                                                                                                                                                                                                                                                                        687
                                                                                                                                                                                                                                                                                                                              645
                                                                                                                                                                                                                                                                                                                                                                                    627
                                                                                                                                                                                                                                                                                                                                                                                                                                                585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATAGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 386
                                                                                                                                                                                                      CGGGACACCGTGTGGGTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC 566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 446
AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                    TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAAACCTT 626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                           TTCCAGTGCTTCAATTGCAGCCTCTGCCTCCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfizenmaier, K., Lantz, M., Olsson, I., Hauptmann, R., Stratowa, C. an Adolf, G.R.
Adolf, G.R.
Molecular cloning and expression of human and rat tumor necrosis factor receptor chain (p60) and its soluble derivative, tumor necrosis factor-binding protein 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA Cell Biol. 9, 91090841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /yene="INF receptor"
294. .1571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /product="tumor necros1s factor receptor"
/db_xref="pin:9339756"
/db_xref="pin:9339756"
/translation="MGLSTVPDLLIPLYLLELLYGIYPSGVIGLVPHLGDREKRDSVC
PGGKYIHPONNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLHRCLSC
SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYMSENLFQCFNCSLCLNGTVHLSCQE
KQNTVCTCHAGFFLRENCVSCSNCKKSLECTKLCLPQIENVGTEDSGTTVLLFVI
FFGLCLLSLLFGIGLMYRYQRMYSKYLSIVCGKSTPEKEGELBGTTTKRLAPNPSFSTF
PGFTPTLGFSPVPSSTFTSSSTYTPGDCPNFAAPRREVAPPYGGADFILATALASDFI
PNPLQKWEDSAHKPQSLDTDDPATLYAVVENVPPLRWKETVRRLGLSDHEIDRLELQN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene="TNE
207. .1574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="TNF receptor"
/product="tumor necrosis factor receptor"
632 c 589 g 456 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/db_xref="taxon:9606"
207. .293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="INF receptor"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "INF receptor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 514; DB 27; Le
Pred. No. 0.00e+00;
Namatches 0;
                                 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 2112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                              686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       464
                                                                                                                                                806
                                                                                                                                                                                                                                                                                                                           704
                                                                                                                                                                                                                                                                                                                                                                                                                                          644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
JOURNAL MEDLINE FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
LOCUS
                       δ.
                                                                                Ş
밁
                                                     밁
                                                                                                            밁
                                                                                                                                                                                              BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sg
                                                                                                                                                                                                                                       polyA_site
                                                                                                                                                                                                                                                                             polyA_signal
                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                            405
496
                                                      436
                                                                                345 GATAGTGTGTGCCCCAAGGAAAATATATCCACCTCAAAATAATTCGATTTGCTGTACC 404
                                                                                                            376 GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             825 AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10
                         AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                     AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 495
                                                                                                                                      39.5%;
l Similarity 100.0%;
514; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nophar,Y., Kemper,O., Brakebusch,C., Englemann,H., Zwang,R., Aderka,D., Holtmann,H. and Wallach,D. Soluble forms of tumor necrosis factor receptors (TNF-Rs). The for the type I TNF-R, cloned using amino acid sequence data of soluble form, encodes both the cell surface and a soluble form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               H.sapiens TNF-R mRNA for tumor necrosis factor receptor type 1. x55313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the receptor EMBO J. 9 (10), 3269-3278 (1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; H. (bases 1 to 2161)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g37223
TNF-R gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   91006021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HSTNFR1A
                                                                                                                                                                                                             459
                                                                                                                                                                                                           9
                                                                                                                                                                                                                                     /gene="TNF-R"
2145. .2150
/gene="TNF-R"
/note="putative
2161
                                                                                                                                                                                                                                                                                                                                                                /gene=*
                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="TNF-R"
757. .857
                                                                                                                                                                                                                                                                                                                                    /gene="TNF-R"
634. .756
                                                                                                                                                                                                           /gene="TNF-R"
642 c
                                                                                                                                                                                                                                                                                                                                                                                                                     GRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPP!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       256. .1623
/gene="TNF-R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tumor necrosis factor receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2161
                                                                                                                                                                                                                                                                                                                                                                .633
                                                                                                                                                                                                                                                  "putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ğ
                                                                                                                                      Score 514; DB 27; 1
Pred. No. 0.00e+00;
0; Mismatches 0;
                                                                                                                                                                                                          604 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RNA
                                                                                                                                                                                                           456 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             858
                                                                                                                                                                 Length 2161;
                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-JAN-1993
                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo
                                                                                                                                       Gaps
                           464
                                                                                                                                         0
```

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
Query Match 39.5%;
Best Local Similarity 100.0%;
Matches 514; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG 735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                      YEDA RES & DEV (IL)
Other publication ZA 9407962
Other publication JP 7194376
Other publication AU 7574294
Other publication CA 2133872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 2175)
Wallach,D., Brackebusch,C., Varfolomeev,E. and Batkin,M.
Proteases capable of shedding the soluble TNF-receptor a
derived peptides and antibodies against the proteases in
the shedding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
A43873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  unidentified unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g2299022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A43873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  unclassified
                                                                                      474
                                                                               /codon_start=1
/db_xref="plD:e305402"
/db_xref="plD:e305402"
/db_xref="plD:e305402"
/db_xref="plD:e3299023"
/db_xref="plD:e3299023"
/db_xref="plD:e3299023"
/translation="mGLSTVPDLLLPLYLLELLVGIYPSGVIGLVPHLGDREKRDSVC
POGKYIHPONNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSC
SKCRKEMGOVELSSCTVDRDTVCGCRKNOYRHYWSENLPOCFNCSLCLNGTVHLSCOE
KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTTVHLEPLVI
FFGLCLLSLLFIGLMYRYQRWKSKLYSIVCGKSTPEKBGELEGTTKPLAPNPSFSPT
FFGLCLLSLLFIGLMYRYQRWKSKLYSIVCGKSTPEKBGELEGTTKPLAPNPSFSPT
PGFTTPTLGFSPVPSSTFTSSSTYTPGDCPNFAAPRREVAPPYQGADPILATALASDPI
PGFTTPTLGFSPVPSSTFTSSSTYTPGDCPNFAAPRREVAPPYQGADPILATALASDPI
PGFTTPTLGFSPVPSSTFTSSSTYTPGDCPNFAAPRREVAPPYQGADPILATALASDPI
PGFTCAMEDSAHKPQSLDTDDPATLYAVVENVPPLRWKEEVRRLGISDHEIDRLELQN
GRCLREAQYSHLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPPA
PSLLR"

74 a 641 c 604 g 456 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EP 0657536-A 1 14-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ,...
                                                                                                                                                                                                                                                                                                                     /organism="unidentified"
/db_xref="taxon:32644"
256. .1623
                                                                                                                                                                                                                                                                                                     /note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent EP0657536.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   đđ
Score 514; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                        951121
950801
950504
950413.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       858
                               Length 2175;
 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NF-receptor and TNF-R proteases inhibiting
 0
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           795
 0
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                 JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                    RESULT
LOCUS
                         Q
                                                밁
                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                  ΩV
                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
           皮
                                                                                   밁
                                                                                                                                             ORIGIN
                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                       Query Match
Best Local S
Matches 51
                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                         source
           496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       376
                             405
                                                                                      376
                                                                                                                                                                                                                                                                                                                                                           825
                                                                                                                                                                                                                                                                                                                                                                                                                                                       736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        556
                                                                   345
                                                                                                                                                                                                                                                                                                                                                                                                765
                                                                                                                                                                                                                                                                                                                                                                                                                 796
                                                                                                                                                                                                                                                                                                                                                                                                                                    705
                                                                                                                                                    M Unclassified.

3 1 (bases 1 to 2175)

S Wallach,D., Brakebusch,C., Varfolomeev,E. and Molecules influencing the shedding of the TN preparation and their use preparation and their use preparation and their use 1. Coation/Qualifiers 1. .2175

I. .2175

A56 t
                                                                                                                                                                                                                                                                                                                               12
                                                                 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 495
                                                                                                                                                                                                                                                                                                                                                          AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                                                                                                                                                                    AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                  AAACAGAACACCGTGTGCACCTGCCATGCAGGTTTCTTCTAAGAGAAAACGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTGCTCCAPATGCCGAPAGGAPATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                        TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                         Sequence
164751
                                                                                                                                                                                                                                                 Unknown
                                                                                                                                                                                                                                                                              g2481645
                                                                                                                                                                                                                                                                                                                     164751
                                                                                                                                                                                                                                                             Unknown.
                                                                                                      h 39.5%;
Similarity 100.0%;
514; Conservative
                                                                                                                                                                                                                                                                                                  from
                                                                                                                                                                                                                                                                                                 patent
                                                                                                                                                                                                                                                                                                                    đđ
                                                                                                      Score 514; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 0
                                                                                                                                                                                                                                                                                                  SD
                                                                                                                                                                                                                                                                                                   5665859
                                                                                                                                                                                                                                                                                                                                                           858
                                                                                                       0
                                                                                                                                                                                                                                                                                                                     PAT
                                                                                                                         Length
                                                                                                                                                                                                            and Batkin, M.
TNF receptor,
                                                                                                                          2175;
                                                                                                                                                                                                                                                                                                                     26-SEP-1997
                                                                                                       0
                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 495
           555
                                                                                                                                                                                                                                                                                                                                                                                                824
                                                                                                                                                                                                                                                                                                                                                                                                                 855
                                                                                                                                                                                                                                                                                                                                                                                                                                  764
                                                                                                                                                                                                                                                                                                                                                                                                                                                      795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     404
```

```
REFERENCE
AUTHORS
δÕ
                    밁
                                     δ.
                                                             멍
                                                                              δδ
                                                                                                      밁
                                                                                                                       Ş
                                                                                                                                                밁
                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                            Ü
                                                                                                                                                                                                             Query Match
Best Local S
Matches 51
                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 585
  585
                     616
                                                                                                                            405
                                                                                                                                                 436
                                                                                                                                                                     345
                                                                                                                                                                                         376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 465
                                                              556
                                                                                   465
                                                                                                       496
                                                                                                                                                                                                            y Match
Local Similarity 100.0%;
hes 514; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13
                                                                                                                                                                 AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AATGTTAAGGGCACTGAGGACTCAGGCACCACAG 858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG 735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
         CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT 675
                                                                                                                         AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATGTTAAGGGCACTGAGGACTCAGGCACCACAG 889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                    AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                            TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
CGGGACACCGTGTGGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                  TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                       AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                 unidentified unidentified unclassified.
                                                                                                                                                                                                                                                                                                         I (TBP-I)
Patent: E
YEDA RESE
                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic
A19907
                                                                                                                                                                                                                                                                                                                                                        Wallach, D., Nophar, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                           g641222
                                                                                                                                                                                                                                                                                                                                         Expression of the recombinant tumor
                                                                                                                                                                                                                                                                                                                                                     Aderka, D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A19907
                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 2176)
                                                                                                                                                                                                                                                                                    nt: EP 0433900-A 28 26-JUN-1991;
RESEARCH AND DEVELOPMENT COMPANY LIMITED LOCATION/Qualifiers
1. 2176
                                                                                                                                                                                                                                                                  œ
                                                                                                                                                                                                                                                               /organism="Artificial
642 c 604 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                 nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   đđ
                                                                                                                                                                                                            ; Score; Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                              sequence
                                                                                                                                                                                                                                                                                                                                                           Kemper, O., Engelmann, H., Brakebusch, C. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                      514; DB 25; Length 2176; No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Type I TNF
                                                                                                                                                                                                                                                                  sequences
                                                                                                                                                                                                                                                                                                                                         necrosis
                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                              receptor
                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                         factor
                                                                                                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   04-OCT-1994
                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                       binding protein
                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  675
                                                            615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       584
644
                                        584
                                                                                  524
                                                                                                     555
                                                                                                                         464
                                                                                                                                                                                                            0
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
LOCUS
                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      먕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
Š
                                       멂
                                                                               Q
                                                                                                                           밁
                                                                                                                                                                   Ş
                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 39.5%;
Best Local Similarity 100.0%;
Matches 514; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                            2145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2025
                                                                                                                                                                                                                                                                                                                                                                                      1905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Winknown.

Unclassified.

Unclassified.

Crowley.C.W.

SCrowley.C.W.

Wethod for selecting high-expressing howard for selecting high-expression 
                                                                                                                                                                                                                                                                                                                                                                                                                                465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                645
                                                                                                                                                                       645
                                                                                                                                                                                                                                                         585
                                                                                                                                                                                                                                                                                                                                            525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          676
                                                                                   705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 705
    765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC 1844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                        TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                               TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                         CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT 2024
                                                                                                                                                                                                                                                                                                                                                                   AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC 1964
                                                                                                                                                                                                                                                                                                                                                                                                                              TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
    TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                          AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
I26928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g1606798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          126928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              patent US 5561053.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 514; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         host
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 6889;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1904
                                                                                                                                                                                                                                                         644
    824
                                         2204
                                                                                 764
                                                                                                                           2144
                                                                                                                                                                       704
                                                                                                                                                                                                               2084
                                                                                                                                                                                                                                                                                                                                                                                                                                524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        735
                                                                                                                                                                                                                                                                                                                                            584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                    밁
                                  ρy
                                                       밁
                                                                      δ
                                                                                         밁
                                                                                                            Š
                                                                                                                                                Ş
                                                                                                                                                                       밁
                                                                                                                                                                                      δõ
                                                                                                                                                                                                             밁
                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
Š
                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                          Query Match 39.0%;
Best Local Similarity 99.8%;
Matches 513; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                694 TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCCTACCCCAGATTGAG
                                                                                    575
                                                                                                                                                                                                             455
                                                                                                                                                                                                                              465
                                                                                                                                                                                                                                                 395
                                                                                                                                                                                                                                                                                                        345
  825
                   754
                                      765
                                                                           705
                                                                                                                645
                                                                                                                                                    585
                                                                                                                                                              515 CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT 574
                                                                                                                                                                                         525
                                                                                                                                                                                                                                                                                                                          275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15
                                                                                                                                                                                                                                                                                                     GATAGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 334
                                                                                                                                                                                                                            TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC 454
AATGTTAAGGGCACTGAGGACTCAGGCACCACAG 787
                                                                                                             CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                     TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g1247401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     55kD receptor gene for human TNF-alpha. A20255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 2061)
                                                                                                                                                                                                                                                                                                                                                                                                                                       MODIFIED HUMAN TNFALPHA (TUMOR NECROSIS FACTOR ALPHA) RECEPTOR PATENT: WO 9207076-A 23 30-APR-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A20255
                                                                                                                                                                                                                                                                                                                                                                                          429
                                                                                                                                                                                                                                                                                                                                                                                          ø
                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/db_xref="taxon:9606"
616 c 573 g 44
                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              đđ
                                                                                                                                                                                                                                                                                                                                         Score 507; DB 25; LA
Pred. No. 0.00e+00;
^. Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                          443 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2238
                                                                                                                                                                                                                                                                                                                                                            Length 2061;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT
                                                                                                                                                                                                                                                                                                                                          Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-SEP-1995
                                                                                                                                                                                                                                                                                                                                           Gaps
                                                       753
                                                                          764
                                                                                            693
                                                                                                               704
                                                                                                                                 633
                                                                                                                                                   644
                                      824
                                                                                                                                                                                                                                                                                                                                           1.
```

Search completed: Wed May 6 14:44:21 1998 Job time: 1340 secs.

#### THIS PAGE BLANK (USPTO)

```
(ME)
```

Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_nn n.a. - n.a. database search, using Smith-Waterman algorithm

Run on: Wed May 6 15:05:10 1998; MasPar time 167.20 Seconds 897.906 Million cell updates/sec

Tabular output not generated.

(1-1301) from US08804166.seq >US-08-804-166-7

Description:
Perfect Score:
N.A. Sequence:
Comp: 1 CTCGAGATGGCTACAGGTAA......CACAATAAGGATCCCTCGAG 1301 GAGCTCTACCGATGTCCATT......GTGTTATTCCTAGGGAGCTC

Scoring table: TABLE default Gap 6

Nmatch STD : Dbase 0; Query 0

Searched: 159651 seqs, 57698962 bases x 2

Post-processing: Minimum Match 0% Listing first 45 summaries

Database:

n-geneseq30
1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26 27:part27 28:part28
29:part29 30:part30 31:part31 32:part32 33:part33

Statistics: Mean 9.269; Variance 5.321; scale 1.742

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result	Score	Query Match	<b>-</b>	BIG	ID	Description	Pred. No.
ב ב	514	39.5	1334	ㅁ :	Q06282	Plasmid Tumour Necros	0.00e+00
2	514	39.5	1368	œ	Q49932	Lambda-derived TNF-R	0.00e+00
ω	514	39.5	2062	4	Q24440	Encodes TNF-alpha 55k	0.00e+00
4	514	39.5	2062	ω	Q20973	TNF-alpha binding pro	0.00e+00
ر ن	514	39.5	2088	N	Q10883	30kD TNF inhibitor pr	0.00e+00
o	514	39.5	2111	N	Q10955	Encodes human 55kD TN	0.00e+00
7	514	39.5	2175	15	Q90513	p55 TNF-R gene.	0.00e+00
8	514	39.5	6889	18	T15931	DHFR/intron (WTrasSD)	0.00e+00
9	512	39.4	2141	Н	Q06285	Human Tumour Necrosis	0.00e+00
10	512	39.4	2176	N	Q12215	Type I TNF receptor.	0.00e+00
11	510	39.2	2170	9	Q50870	p55 Tumour necrosis f	0.00e+00
12	478	36.7	809	4	Q24441	Encodes truncated INF	0.00e+00
13	416	32.0	579	ω	Q14800	Human chorionic gonad	6.61e-279
14	415	31.9	836	17	T03212	Single chain gonadotr	3.64e-278
15	415	31.9	836	17	T03243	chain	3.64e-278

Query Match

39.5%;

Score 514;

DB 1;

Length 1334;

		n																							
44	442	40	39	ນ ຜ 7	36	35	34	ω ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	Þ
71 71	72 71	79	99	132	185	188	208	213	215	221	257	259	267	276	282	282	282	285	296	303	304	321	354	383	411
ហ ហ ហ ហ i	თ თ ( თ თ (	5 6 6 1	7.6	10.1 7 8	14.2	14.5	16.0	16.4	16.5	17.0	19.8	19.9	20.5	21.2	21.7		21.7								
700 3557	114	1047		1027				540	525	462	477	2173												504	0/0
NNI	NO	o N	ω,	s N	<b>J-4</b>	2	4	_	۲	4	4	Н	17	17	17	17	17	2	σ	ω	31	7	4	4	-
N60678	Q34669 N71239	Q10572	Q80819	Q10878	Q03848	N60523	N30032	Q03851	Q03844	Q24443	024444	Q06284	T03227	T03221	T03229	T03233	T03231	N60524	Q41459	T62826	T76770	T03219	Q24442	Q24445	T03240
~	DNA encoding hCG beta Sequence encoding hum	Human Natriuretic Pep	LH-beta -5 to 41 frag	Partial sequence of c	Equine beta LH subuni	Sequence encoding dog	Sequence of gene for	Porcine beta LH subun	Bovine beta LH subuni	Encodes truncated TNF	Encodes truncated TNF	nour N	chain	chain	chain	chain	Single chain gonadotr	Sequence encoding hum	Human growth hormone	Human growth hormone	Rat Fabpl gut-specifi	Single chain gonadotr	Encodes truncated INF	Encodes truncated INF	Human CG beta-subunit
$\mathbf{N} \mathbf{N} \mathbf{I}$	. 81e-	7.76e-35	1.71e-48	1.41e-71 7 09e-50	1.84e-109	1.26e-111	4.28e-126	1.01e-129	3.57e-131	1.56e-135	8.89e-162	3.07e-163	4.31e-169	.10e-	4.41e-180	4.41e-180	4.41e-180	2.78e-182		1.69e-195	3.12e-196	9.76e-209	4.64e-233	1.75e-254	3.34e-2/

#### ALIGNMENTS

SS	8888	88	8	88	88	3 8	Sd	ŢŢ	7 !		ין נ ו	PA	PR	PR	Äď	PD	PN	ΕŢ	ΨŢ	Ŧ	FΗ	SO	XX	X C	J [	A	RESULT	
	(BRL) cut with the same enzymes to recover pTNF-BP. This was cut with BamHI and EcoRI, and the recovered fragment inserted into pAD-CMVI (Q06283) to give the required plasmid pADTNF-BP.  See also 006282-006285	amplified DNA cut with BamHI and ECORI. The resulting 0.75 kb DNA fragment was inserted into pT7/T3 alpha-19	protein, this plasmid was cut with XmmI, amplified by PCR and the	were constructed from the determined amino acid sequence. To produce a vector expressing a soluble form of TNF-binding	Ō,	pTNF-BP15 is one of 30 positives clones in a screened cDNA library	Disclosure; Fig 1(1-3); 51pp; German.	sm to TNF act	DNA prooding TWF hinding protein and TWF- recentor - used in	P-PSDB: R07449.	Hauptmann R, Himmler A, Maurer-Fogy I, Stratowa C;	NGELHEIMINT.	21-JUN-1989; DE-920282.		06-APR-1990; 106624.	24-OCT-1990.	EP-393438-A.	/product-TNF-BP	/*tag= a	CDS 2131325		Homo sapiens.		oinding protein; TNF-BP; TNF-rec	Dlasmid Tumour Necrosis Factor-Binding Drotein 15 CDNN incort		LT 1 Q06282 standard; DNA; 1334 BP.	

Local

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                              8 B
                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                           W09319777-A.
14-OCT-1993.
26-MAR-1993; U02938.
30-MAR-1992; US-860710.
(IMMY) IMMUNEX CORP.
                                                                                                                                                                                           LT 2
049932 standard; cDNA to mRNA; 1368 BP.
049932;
29-APR-1994 (first entry)
Lambda-derived TNF-R cDNA.
Human; tumour necrosis factor receptor; TNF-R; interleukin-1 receptor;
IL-1R; fusion protein; linker; TNF; IL-1; cachexia; cerebral malaria;
rheumatoid arthritis; diabetes; multiple sclerosis; septic shock;
pulmonary fibrosis; silicosis; allograft; xenograft; rejection;
graft verses host disease; sepsis; inflammation; allergy;
                                                                                                     mat_peptide
/*tag=_c
                                                                                                                      /product= hT
sig_peptide
/*tag= b
   New fusion protein tumour necrosis factor and human interleukin-1 receptor - useful in therapy, diagnosis and assays of e.g. rheumatoid arthritis, diabetes, cerebral malaria, sepsis, etc. Disclosure; Page 57-59; 85pp; English.
                                                     (IMMV
                                      WPI; 93-336592/42.
P-PSDB; R42059.
                                                                                                                                                                                Autoimmune o
                                                                                                                                                                                                                                                                                                  825
                                                                                                                                                                                                                                                                                                                                  765
                                                                                                                                                                                                                                                                                                                                                                                                  645
                                                                                                                                                                                                                                                                                                                                                                                                                                    585
                                                                                                                                                                                                                                                                                                                                                                                                                                                    573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    333
                                                                                                                                                                                                                                                                                                                                                  753
                                                                                                                                                                                                                                                                                                                                                                   705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  aatgttaagggcactgaggactcaggcaccacag
                                                                                                                                                                                                                                                                                                                                                                tcctgtagtaactgtaagaaaagcctggagtgcacgaagttgtgcctaccccagattgag
                                                                                                                                                                                                                                                                                                                                                                                                          ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                                  TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                           cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                      ر
د ج
                                                                                                                                                               -gt10-7-ctnfbp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . Similarity 514; Conser
                                                                                                                                                                                         dysfunction;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .arity 100.0%;
Conservative
                                                                                                               121..1363
                                                                                                                               1..120
                                                                                                                                                                                         88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No. 0.00e+00;
                                                                                                                                                                                                                                                                                                  858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   452
                                                                                                                                                                                                                                                                                                                                                                                                                  692
                                                                                                                                                                                                                                                                                                                                                                                                                                  644
                                                                                                                                                                                                                                                                                                                                                                                                                                                  632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    404
                                                                                                                                                                                                                                                                                                                                  824
                                                                                                                                                                                                                                                                                                                                                 812
                                                                                                                                                                                                                                                                                                                                                                 764
                                                                                                                                                                                                                                                                                                                                                                                                  704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
  RESULT 3
ID 024440;
AC 024440;
DT 05-NOV-1992
DE Encodes TNF-e
KW tumour necros
KW treatment; pu
KW malaria; vire
KW autoimmune di
KW autoimmune di
KW autoimmune di
                                                                                                                      밁
                                                                                                                                    Ş
                                                                                                                                                    밁
                                                                                                                                                                    Ş
                                                                                                                                                                                      밁
                                                                                                                                                                                                     S
                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                        片
                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                        δ.
                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 51
541
                                                                                                      825
                                                                                                                                      765
                                                                                                                                                                       705
                                                                                                                                                                                      481
                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                        585
                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                        525
                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                        465
                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                         405
                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                         345
                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                    standard;
```

```
888888888888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The linker may comprise 5-100 amino acids selected from Gly, Asp, Ser, Thr and Ala. These linkers separate the individual moeities by such a distance that each component of the fusion protien is capable of folding into the secondary or tertiary structure required for its biological activity. These fusion proteins may be used in therapy, diagnosis and assays for conditions mediated by TNF or II-1, particularly in conditions in which both TNF and II-1 play a causitive role. They may be used to treat cachaxia, rheumatoid arthritis, diabetes, multiple sclerosis, pulmonary fibrosis and silicosis, cerebral malaria, allograft and xenograft rejection in graft verses host disease, sepsis, septic shock, inflammation, allergies and autoimmune dysfunctions.

Sequence 1368 BP; 292 A; 424 C; 376 G; 276 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The sequences given in Q49931-32 encode human tumour necrosis receptor (TMF-R) and the sequences in Q4993-34 encode human interleukin-1 receptor (IL-IR). These sequences were used in production of a fusion protein which conformed to one of the formulae:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TNF-R-linker-TNF-R-linker-TL-1R
IL-1R-linker-TNF-R-linker-TNF-R
                                                               aatgttaagggcactgaggactcaggcaccacag
                                                                                                                                                                                                                                                                       ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tcctgtagtaactgtaagaaaagcctggagtgcacgaagttgtgcctaccccagattgag
                                                                                                                                                                                                    agctgctccaaatgccgaaaggaaatggggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                            AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                39.5%;
l Similarity 100.0%;
514; Conservative
DNA;
2062
ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 514;
Pred. No. 0.
0; Mismatcl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                404
                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                   600
                                                                                                                                                                                                      764
                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                     704
                                                                                                                                                                                                                                                                                                                                         644
                                                                                                                                                                                                                                                                                                                                                                                                          584
                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

human

Location/Qualifiers 156..1517

```
á
                                                                     밁
                                                                                             Ş
                                                                                                                        밁
                                                                                                                                                 Ş
                                                                                                                                                                               밁
                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                               Š
                 맑
                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 51
                                                                                                                                                                                                                                                                                                                                                                                                  New polypeptide capable of binding human TNF alpha - comprises

first three cysteine-rich subdomains of TNF alpha receptor for

treating autoimmune disease, septic shock, HIV etc.

Claim 4; Fig 1; 43pp; English.

This sequence encodes human TNF-alpha 55kD receptor . A placenta cDNA

Library in gt10 was screened with probe Q29236. Ten hybridising clones

were plaque purified and cDNA size determined by PAGE against an

Eco RI digested phage DNA. The inserts of two cDNA clones were then

sequenced. The coding region of the majority of the human TNF-alpha

Sequenced. The coding region of the majority of the human TNF-alpha

Sequenced. The coding region of the majority of the human TNF-alpha

Codis, and cloned into a mammalian cell expression vector, resulting

in prTNFR. A derivative of the TNF-alpha receptor was produced by

censineering a termination codon just prior to the transmembrane

commain. PCR with primers Q29237,8 generated a 300bp

restriction fragment which was cloned into prTNFR, giving pTNFRecd.

CDNA sequencing confirmed this contained the designed DNA sequence.

The TNF-alpha receptor expression plasmids were then transfected

separates CANAGET 2010. E2000-EAA E22255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-APR-1992.
18-CCT-1991; GO1826.
18-CCT-1990; GB-022648.
(CHAR: ) CHARING CROSS S
Brennan FM, Feldmann M,
WPI; 92-167156/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*rag= a
/product= hu
mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag= b
/note= "3"
mat_peptide
                                                                                                                                                                                                                                                                                                                                                                             See also Q24440-51, R24000, R24080-84, Sequence 2062 BP; 429 A; 618 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /codon= Seq
mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P-PSDB; R24000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag= e
/codon= Seq:"GAC", aa:As:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /codon-seq:"TGG", aa:Thr
nat_peptide 1258..1260
                 575
                                         585
                                                                                                                           455
                                                                                                                                                      465
                                                                                                                                                                               395
                                                                                                                                                                                                            405
                                                                                                                                                                                                                                      335
                                                                                                                                                                                                                                                                  345
                                                                                                                                                                                                                                                                                            275
                                                                                                                                                                                                                                                                                                                      . Match 39.5%; Local Similarity 100.0%; les 514; Conservative
                                                                                                                                                                                                                                                                              gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc 334
                                        eagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                          AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                               GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Seq"AAG", aa:Leu
tide 1433..1435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -022648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TNF-alpha
1265..1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1265..1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               aa:Asn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ĭ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  M, Gray
                                                                                                                                                                                                                                                                                                                   Score 514; DB 4;
Pred. No. 0.00e+00;
0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RES CENT.
PW, Turner
                                                                                                                                                                                                                                                                                                                                                                           R27585, Q29236-8
; 572 G; 443
                                                                                                                                                                                                                                                                                                                      0; Indels 0;
                                                                                                                                                                                                                                                                                                                                               Length 2062;
                                                                                                                                                                                                                                                                                                                                                                             443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     placenta cDNA
                                                                                                                                                                                                                                                                                                                                                                             H
                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clones
                                                                                                                        514
                                                                                                                                                                               454
                                                                                                                                                                                                          464
                                                                                                                                                                                                                                    394
              634
                                         644
                                                                   574
                                                                                                584
                                                                                                                                                    524
                                                                                                                                                                                                                                                                                                                      0;
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                        밁
                                                                                     å
                                                                                                                                  밁
                                                                                                                                                                           Ş
                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-JUN-1990; 013410.
15-JUN-1990; GB-013410.
(CHAR-) CHARING CROSS SUNLE.
Feldman M, Gray P, Turner M, B
WPI; 92-043613/06.
P-PSDB; R20787.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q20973
Q20973;
                                                                                                                                                                                                                                                                                                                                                           e.g. rheumatoid arthritis
Disclosure; Fig 1; 25pp; English.
The sequence is that of DNA encoding tumour necrosis factor alpha
binding protein which was obtd. from a human placental cDNA library
in lambda gtl1 using a probe (Q20974). The DNA also encodes the
extracellular domain of human TNF alpha receptor and as such it is
useful for treating diseases where TNF alpha is involved as a
causative agent, e.g. cachexia, sepsis and autoimmune diseases,
specifically rheumatoid arthritis. See also Q20974.
Sequence 2062 BP; 429 A; 616 C; 573 G; 444 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note- "encodes the extracellular domain of human TNF alpha receptor" GB2246569-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sig_peptide
/*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tumour necrosis factor extracellular domain.

    New tumour necrosis factor alpha binding processing the second of the sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "homologous to probe misc_feature 242..751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mat_peptide
/*tag=_c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TMF-alpha binding protein gene.
Tumour necrosis factor alpha; a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
465
                                          395
                                                                                     405
                                                                                                                                  335
                                                                                                                                                                                  345
                                                                                                                                                                                                                             275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11-MAY-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    aatgttaagggcactgaggactcaggcaccacag
                                                                                                           aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                                                     gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tcctgtagtaactgtaagaaaagcctggagtgcacgaagttgtgcctaccccagattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                  GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                        AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         standard;
                                                                                                                                                                                                                                                                        514;
                                                                                                                                                                                                                                                                                           39.5%;
Similarity 100.0%;
                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    473..532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             275..1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          155..274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers 155..1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2062
                                                                                                                                                                                                                                                                Score 514;
Pred. No. 0.
0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q20974'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Brennan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  autoimmune
                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ę
                                                                                                                                                                                                                                                                                             DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein
nd auto im
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    diseases;
                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and polypeptide mmune diseases
                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cachectin;
                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                     Gaps
                                        454
                                                                                                                                                                                404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      694
                                                                                     464
                                                                                                                                  394
                                                                                                                                                                                                                          334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   704
                                                                                                                                                                                                                                                                        0
```

```
Ş
                                                   묽
                                                                                     δã
                                                                                                                                      몽
                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              AU9058976-A.
NAU9058976-A.
NAU9058976-A.
PD 24-JAN-1991.
PD 24-JAN-1999; US-381080.
PR 11-JUL-1999; US-381080.
PR 11-JUL-1999; US-450329.
PR 11-JUEC-1999; US-479661.
PR 11-JUEC-1999; English.
PR P-SDB; R10986.
PT Tumour necrosis factor inhibitor - for suppression of TNF-alpha
PT Tumour necrosis factor inhibitor - for suppression of TNF-alpha
PT Tumour necrosis factor inhibitor. The clone from
PR P-SDB; R10986.
PT Tumour necrosis factor inhibitor. The clone from
PR P-SDB; R10986.
PT Tumour necrosis for sequence was obtd. was isolated from Albray
PT The sequence was obtd. was isolated from A CDNA libray
CC which the sequence was obtd. was isolated from A CDNA libray
CC which the sequence was obtd. was isolated from A CDNA libray
CC prepd. from RNA form U937 cells treated with PNA/PNA. The whole
CC gene can be inserted into expression vectors for prepn. of TNF
CC inhibitor for use in the treatment of inflammatory and degenerative
                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Olo883 standard;
Olo883;
Olo883;
Olo883;
Olo863;
Olo863;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Key
CDS
                                                                                                                                                                                                                                                                                                                                                                                                   diseases.
See also Q10878,
Sequence 2088 I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30kD TNF inhibitor precursor gene : Tumour necrosis factor; inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             455
                                                   409
                                                                                                    405
                                                                                                                                                   349
                                                                                                                                                                                                      345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            525

        ### Results of the control o
                                                                                                                                                                                               GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC 404
                                                                                                                                                                                                                              gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgatttgctgtacc 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    aatgttaagggcactgaggactcaggcaccacag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tcctgtagtaactgtaagaaaagcctggagtgcacgaagttgtgcctaccccagattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                         tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                               AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                   39.5%;
Similarity 100.0%;
514; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                   BP; 439 A; 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
171..1536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entry)
                                                                                                                                                                                                                                                                                                 Score
Pred.
0; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ВP
                                                                                                                                                                                                                                                                                                                                                                                                   626
                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                          514;
No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SS.
                                                                                                                                                                                                                                                                                                                                                                                                     <u>:</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               lambda-gt10-7ctnfbp.
                                                                                                                                                                                                                                                                                    DB 2;
0.00e+00;
1.as 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       858
                                                                                                                                                                                                                                                                                                                                                                                                     578
                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                   ဂ္ပ
                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                   445
                                                                                                                                                                                                                                                                                                                                                  2088;
                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        574
                                                                                               464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       644
                                                                                                                                                                                                                                                                                                   0
```

```
rartial amino acid sequences were determined for the 55 and 75kD CC TNF-BPs (see R11072-R11081) and oligonucleotide primers were cc synthesised based on these partial sequences. The primers were used cc to produce a cDNA fragment for use as aprobe to screen a human cc placental cDNA bank constructed in lambda gtll. Positive clones were identifed and sequenced. DNA constructs comprising the TNF-BP coding cc sequence may also contain a fragment encoding a human Ig domain. CC Recombinant constructs are used to transform cells to confer cc improved TNF-binding properties.
                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
V
                         &
                                               Query Match 39.5%;
Best Local Similarity 100.0%;
Matches 514; Conservative
                                                                                                                                                                                                                                                                                                                    12-SEP-1989; CH-003319.
08-MAR-1990; CH-000746.
20-APR-1990; CH-001347.
(HOFF ) HOFFMANN-LA ROCHI
Brockhaus M, Dembic Z, Ge
                                                                                                                                                                                                                                                                                                                                                                                                        /product= 55
EP-417563-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        sig_peptide
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tumour Necrosis Factor; binding proteins; septic autoimmune glomerulonephritis; lymphokine; cytokk Rey Cocation/Qualifiers 15-.273
                                                                                                                                                                                                                                                                                   WPI; 91-081851/12.
P-PSDB; R11082.
                                                                                                                                                                                                                                                                                                           Brockhaus M,
Schlaeger EJ;
                                                                                                                                                                                                                                                                                                                                                                                  20-MAR-1991.
31-AUG-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                 mat_peptide
/*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Encodes human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q10955 standard;
                                                                                                                                                                                                                                                                       Insoluble tumour necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         585
                         307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
              gatagtgtgtgtccccaaggaaaatatatccaccctcaaaataattcgattttgctgtacc 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      aatgttaagggcactgaggactcaggcaccacag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tcctgtagtaactgtaagaaaagcctggagtgcacgaagttgtgcctaccccagattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ttocagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                      55kD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     55kD TNF-binding
                                                                                                                                                                                                                                                                                                                                                                                                                       TNF-BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDNA;
                                                                                                                                                                                                                                                                                                                     ROCHE AG.
Z, Gentz R, Lesslauer
                                                                                                                                                                                                                                                         s factor binding proteins - and DNA pharmaceutical prods. and for antibody
                                             Score 514;
Pred. No. 0.
0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein
                                               re 514; DB 2; Le
1. No. 0.00e+00;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         858
                                                                                                                                                                                                                                                                                                                      W, Lotscher
                                                                       Length
                                                                       2111;
                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       704
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
PT New protease capable of cleaving soluble tumour necrosis factor PT (TNF) receptor - from cell-bound TNF- receptor, useful for antagonising deleterious effects of TNF.

PT antagonising deleterious effects of TNF.

CC Expression of this receptor is regulated by shedding of the extracellular receptor fragment. The p55 TNF-R can be shed in response to different capacity fragment. The p55 TNF-R can be shed in response to different capacity fragment. The p55 TNF-R can be shed in response to different capacity fragment. The p55 TNF-R can be shed in response to different capacity fragment. The p55 TNF-R can be shed in response to different capacity fragment. The p55 TNF-R can be shed in response to different capacity fragment. The p55 TNF-R can be shed in response to different capacity fragments the company region of the receptor whose structure affects the capacity fragment. The p55 TNF-R capacity fragments for the capacity fragments of the capacity fragments of the capacity fragments. The p55 TNF-R and murine paddermal growth factor receptor capacity fragments for the capacity for the capacity fragments are represented by R75007-11. This spacer region was completed to deletion mutations (R75013-25) and substitutions
                                                                                                                                                                                                              04-MAY-1995
11-CCT-1994; 075742.
12-CCT-1993; IL-107268.
(YEDA ) YEDA RES 6 DEV CO L
Batkin M, Brakebusch C, V
WBI; 95-194342/26.
P-PSDB; R75084.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   p55 TNF-R (
                                                                                                                                                                                                                                                                                                                                         /product p:
misc_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LT 7
Q90513
Q90513;
                                                                                                                                                                                                                                                                                                                                                                                                                Homo
                                                                                                                                                                                                                                                                                                                                                                                                                         p55; tumour necrosis factor receptor; TNF-R; epidermal growth factor receptor; EGF-R; prophorbol myristate acetate; PMA; ss.
                                                                                                                                                                                                                                                                                                                     'note= "possible poly-A signal"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aatgttaagggcactgaggactcaggcaccacag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tcctgtagtaactgtaagaaaagcctggagtgcacgaagttgtgcctaccccagattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          standard;
                                                                                                                                                                                                                                                                                                                                                            p55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                            TNF-R
                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers 256..1623
                                                                                                                                                                                                                                                                                                                                                  2143..2149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2175
                                                                                                                                                                                                                                         Varfolomeev
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ВP
                                                                                                                                                                                                                                        [F]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             858
                                                                                                                                                                                                                                                                                                                                                                                                                                       F-R; human; murine; c protease; inhibitor;
                                                                                                                                                                                                                                         Wallach
                                                                                                                                                                                                                                        Ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                      chimera;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             524
```

```
RESULT RESULT AC 1. AC 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VQ
VQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 51
                                                                                                                                                                                                                                                                                                                                                                                                          יטטי
115931 standard; ו
115931;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (R75026-47). Of the spacer region, the most important residues are Asn 172, Val 173, Lys 174 and Gly 175, with Val 173 being the most important of these. The shedding of the receptor is independent of the side chain identity of these residues, with the exception of a limited dependence on the identity of Val 173. Mutations which alter the conformation of the protein adversely effect the shedding process. The mutations shown in R75013-47 were introduced in order to create an inhibitor of a protease that is capable of cleaving the soluble TNF-R from the cell bound TNF-R. Fragments of these inhibitors can be seen in R75017-9, R75025, R75033-5 and R75042-3. These protease inhibitors can be used for enhancing TNF function.
  Improved process for the expressing high level of cells contg. a DNA constr
                                                                                                                               28-JUL-1995; U09576.
05-AUG-1994; US-286740.
(GETH ) GENENTECH INC.
                                                                                                                                                                                                                                       Synthetic.
WO9604391-A1.
                                                                                                                                                                                                                                                                                     DHFR/Intron (WTrasSD)-TnFr-IgG dicistronic vector. Recombinant host cell; dihydrofolate reductase; selectable mecombinant donor, dicistronic vector; gene expression; immunoadhesin; TnFr-IgG; tumour necrosis factor; ds.
                                                                              Crowley CW;
WPI; 96-129407/13.
                                                                                                                                                                                                                                                                                                                                                                                               20-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             376
                                                                                                                                                                                                              .5-FEB-1996.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  aatgttaagggcactgaggactcaggcaccacag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGACACCGTGTGTGCGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tcctgtagtaactgtaagaaaagcctggagtgcacgaagttgtgcctaccccagattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           39.5%;
l Similarity 100.0%;
514; Conservative
                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                           a desired
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 514; DB 15;
Pred. No. 0.00e+00;
0; Mismatches 0
ection of recombinant esired product - uses comprising a selectab
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 2175;
                           host cells
eukaryotic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                             host
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
/*tag= a
/*tag= a
/label=hutnF-R
/label=hutnF-R
/label=hutnF-R
/label=hutnF-R
/label=hutnF-R
/label=hutnF-R
/label=label
/F 06-APR-1990; 106624.
/F 06-APR-1990; DE-913101.
/F 21-JRH-1980; DE-913101.
/F 21-JRU-1980; DE-912101.
/F 21-JRU-1980; DE-912101.
/F 21-JRU-1980; DE-913101.
/F 21-JRU-1
                                                                      PRESULT RESULT R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 39.5%;
Best Local Similarity 100.0%;
Matches 514; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 2; Page 36-42; 137pp; English.

A dicistronic vector (T15930) comprises a regulatory region derived from the cytomegalovirus immediate-early gene, a selectable dihydrofolate reductase gene positioned within an intron having a 5' wild-type ras splice donor site, a downstream sequence coding for an immunoadhesin, TheT-1gC, capable of binding tumour necrosis factor, and a poly-A sequence. Transfection of CHO DHFR- cells and subsequent methotrexate amplification and growth of the cells in nutrient-rich medium gave ThFT-1gC in yields of 9.5 ug/ml (15-fold higher compared to conventional vector amplified pools).

Sequence 6889 BP; 1729 A; 1826 C; 1681 G; 1653 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q06285;
29-JAN-1991 (first entry)
Human Tumour Necrosis Factor-Receptor cDNA insert.
Tumour necrosis factor binding protein; TNF-BP; Tl
lambdaTNF-R2; raTNF-R8; ss.
Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q06285 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            aatgttaagggcactgaggactcaggcaccacag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc 1904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tcctgtagtaactgtaagaaaagcctggagtgcacgaagttgtgcctacccccagattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers 213..1577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2141
                                                                      Maurer-Fogy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₽P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
Pred.
0; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          514; DB 18;
No. 0.00e+00;
                                                                  ŗ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6889;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
TRESOLT ON THE STATE OF THE STA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R WPI; 90-321987/43.

R P-PSDB; R07451.

T DNA encoding TNF binding protein and TNF- receptor - used tumour treatment and to understand mechanismsm to TNF active plascification of the second termine of the second to screen the HS913T cDNA libratic cambia TNF-R2 encodes the complete human TNF-R2 and was used to screen the HS913T cDNA libratic construct a plasmid (pADTNF-R) expressing the product the construct a plasmid (pADTNF-R) expressing the product the case pADTNF-BP (see Q06282).

C See also Q06282-Q06285.

C Sequence 2141 BP; 455 A; 633 C; 593 G; 460 T
/*tag- a
/product- type:
sig_peptide
/*tag- b
mat_peptide
/*tag- c
misc_RNA
/*tag- d
                                                                                                                                                                                                                                                                                                                                                                                                       12-SEP-1991 (first of the second of the seco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q12215 standard;
Q12215;
                                                                                                                                                                                                                                                                                   /*tag= a
/note= "in-frame
                                                                                                                                                                                                                                                                                                                                                terminator
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Y Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               aagtgccacaaaggaacctacttgtacaatgactgtccaggcccgggggcaggatacggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 aatgttaagggcactgaggactcaggcaccacag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gatagtgtgtgtccccaaggaaaatatataccaccctcaaaataattcgatttgctgtacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tcctgtagtaactgtaagaaaagcctggaagtgcacgaagttgtgcctaccccagattcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGTGCCACAAAGGAACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 h 39.4%;
Similarity 99.8%;
513; Conservative
                                                                                                                                                                                           н
                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers 244..246
                                                                                                                                                                                                                                                  termination 256..1620
                                                                                                                                                                                                                                                                                                                                                                                                                                           Factor; TNF;
                                                                                                                                                        TNF receptor 256..318
                                                                                                 319..1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 512;
Pred. No. 0.
                                                                                                                                                                                                                                                                                      codon'
                                                                                                                                                                                                                                                                                                                                                                                                                                           binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                           protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    r cDNA library.
and was used t
product the sam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           used in Faction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
Ş
                                      밁
                                                      δÃ
                                                                           밁
                                                                                           á
                                                                                                                 밁
                                                                                                                                   Š
                                                                                                                                                                                                                 밁
  밁
                                                                                                                                                                          Query Match
Best Local S
Matches 51
                                                                                                                                                                                                                                                                                                                               26-JUN-1991.
13-DEC-1990; 11-092697.
13-DEC-1989; 11-092697.
12-JUL-1990; 11-095064.
(YEDA ) YEDA RES 6 DEV CO L'
Wallach D, Nophar Y, Kemper
Aderka D;
Aderka D;
P-PSDB; R12550.
                                                                                                                                                                                                                      Recombinant tumour necrosis factor binding protein I - prepd. by transfecting eukaryotic cells with vector contg. deoxyribonucleic acid encoding human type T TNF receptor or soluble domain Disclosure; Fig 1(D); 30pp; English.

The Tumour Necrosis Factor Binding Protein I is the soluble form c type I TNF-receptor and constitutes a fragment of the cell surface form of this receptor, corresp. to its extracellular domain. There is no characteristic poly(A) addition signal near the 3' end of the cDNA. The sequence ACTAPAA (tag m) may serve as an alternative to this signal, but with low efficiency.
                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= m
EP-433900-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= h
/label= transmembrane_domain
____ 385..504
                                                                                                                                                                                                                                                                                                                                                                                                                                         polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_unit
/*tag= l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_unit
/*tag= k
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_unit
/*tag= j
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_unit
/*tag- i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /number-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= g
/note= "TBP-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "TBP-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /label= soluble_domain
/note= "may be 2 codon:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /number-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /number-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         longer"
  616
                                      556
                                                          465
                                                                           496
                                                                                               405
                                                                                                                  436
                                                                                                                                     345
                                                                                                                                                       376
                              agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                       tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                            cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                           Similarity
513; Conser
                                                                                                                                                                          39.4%;
larity 99.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         derived sequence"
889..957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    derived sequence"
850..858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  derived sequence"
583..627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               376..414
                                                                                                                                                                                                                                                                                                                                                                                                                                          2145..2150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                505..633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       757..858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 codons shorter
                                                                                                                                                                                                                                                                                                                                                             Kemper O,
                                                                                                                                                                                                               475
                                                                                                                                                                                                               Α;
                                                                                                                                                                         Score 512; DB 2;
Pred. No. 0.00e+00;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                              Engelmann H, Brakebusch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or a
                                                                                                                                                                                                               644 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   i ew
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   codons
                                                                                                                                                                                                                602
                                                                                                                                                                                            Length 2176;
                                                                                                                                                                                                               <u>ი</u>
                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                      soluble form of
ne cell surface
                                                                                                                                                                                                               455
                                                                                                                                                                                                                                                                                                                                                              ç
                                                                                                                                                                                                              H
                                                                                                                                                                          0
                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                      end
                                                                                                                                                                                                                                                                                 0f
                                                                                                                495
                                                                                                                                   404
675
                  584
                                     615
                                                       524
                                                                         555
                                                                                             464
                                                                                                                                                                          0
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                      밁
                                                                           Ş
                                                                                                                      B
                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
õ
                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-NOV-1993.
29-APR-1993; 11-501769.
03-MAY-1992; 11-101769.
03-MAY-1992; 11-101769.
(YEDA ) YEDA RES & DEV CO LTD.
Brakebusch C, Wallach D;
WPI; 93-353057/45.
P-PSDB; R42197.
P-PSDB; R42197.
Modulating activity of tumour necrosis factor receptor - usin peptide(s), antibodies, etc. which interact with critical reg of receptor or effector protein, for controlling auto-immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag= a
/product=
EP-568925-
                                                                                                                                                                                                                                                                                                                               rejection;
be used to
Sequence
                                                                                                                                                                                                                                                                                                                                                                                     disease, septic shock, etc.

Claim 2; Figure 1; 17pp; English.

Modification of the tumour necrosis factor receptor by mutation deletion modulates signal transduction and/or cleavage effected the receptor. This modulation of activity can also be achieved using effector proteins which interact with the TNF receptor.

Molecules which interact with the TNF receptor or the effector proteins can be used to treat or prevent diseases associated with TNF activity e.g. autoimmune disease; rheumatoid arthritis; grain that it is both a contract of the second activity of the second activity e.g. autoimmune disease; rheumatoid arthritis; grain that the second activity of the second activity of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            p55 Tumour necrosis factor receptor coding sequence.
TNF; tumour necrosis factor; receptor; disease; autoimmunity; rheumatoid arthritis; graft rejection; graft vs. host; septic effector protein; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q50870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13-MAY-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     645
                                         496
                                                                                                                                                               345
                                                                                                                                                                                                        376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       585
465
                                                                                  405
                                                                                                                      436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                             aagtgccacaaaggaacctacttgtacaatgactgtccaggcccggggcaggatacggac
                                                                                                                                                           aatgttaagggcactgaggactcaggcaccacag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tcctgtagtaactgtaagaaaagcctggagtgcacgaagttgtgcctaccccagattgag
TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AATGTTAAGGGCACTGAGGACTCAGGCACCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                             Similarity
512; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               standard;
                                                                                                                                                                                                                                                                                                                             on; graft vs. host disease or septic shock.
to treat overdoses of exogenous TNF.
e 2170 BP; 474 A; 657 C; 584 G;
                                                                                                                                                                                                                                             39.2%;
llarity 99.6%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tumour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers 256..1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ВP
                                                                                                                                                                                                                                           Score 510; DB 9;
Pred. No. 0.00e+00;
0; Mismatches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 858
                                                                                                                                                                                                                                                                                    Length 2170;
                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          septic shock;
                                                                                                                                                                                                                                                                                                                               H
                                                                                                                                                                                                                                                                                                                                                                          can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      regions
                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                           d with graft
                                                                                                                                                                                                                                                                                                                                                                          also
                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ьç
                                      555
                                                                                  464
                                                                                                                      495
                                                                                                                                                               404
                                                                                                                                                                                                      435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       644
524
                                                                                                                                                                                                                                               0
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                 밁
                                         ş
                                                                  В
                                                                                         Ş
                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       닭
                                                                                                                                              Query Match
Best Local S
Matches 47
                                                                                                                                                                                                                                                                                                                                                                                                    18-OCT-1991; G01826.
18-OCT-1990; GB-022648.
(CHAR-) CHARING CROSS SU
Brennan FM, Feldmann M,
WPI; 92-167156/20.
                                                                                                                                                                                                                               New polypeptide capable of binding human TNF alpha - comprises first three cysteine-rich subdomains of INF alpha receptor for treating autoimmune disease, septic shock, HIV etc.

Example: Fig 7; 43pp; English.

This sequence encodes the designed TNF-alpha 55kD receptor This sequence encodes the designed TNF-alpha 55kD receptor derivative, as present in pTNFRecd. This was produced as described Q24441. This derivative lacks the 81 carboxyl terminal residues of the cytoplasmic domain. The derivative could be used in the regulation of TNF-alpha mediated responses by binding and sequestering human TNF-alpha e.g. in the treatment of pulmonary diseases, septic shock, HIV infection, malaria, viral meningitis, graft versus host disease and autoimmune diseases, esp. rheumatoid arthrits.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-NOV-1992 (first entry)
Encodes truncated TNF-alpha 55kD receptor (197 amino acids).
tumour necrosis factor alpha; extracellular binding domain;
treatment; pulmonary diseases; septic shock; HIV infection;
malaria; viral meningits; graft versus host disease;
autoimmune disease; rheumatoid arthritis.
                                                                                                                                                                                               See also Q24440-51, R24000, R24080-84, R27585, Sequence 608 BP; 148 A; 159 C; 165 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q24441 standard;
                                                                                                                                                                                                                                                                                                                                                                                           P-PSDB; R24080.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9207076-A.
30-APR-1992.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                          405
                                                                                             345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         556
                 249
                                                                  189
                                                                                                                      129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    736
                                                                                                                                            / Match 36.7%;
Local Similarity 99.8%;
les 479; Conservative
                                        aatgttaagggcactgaggactcaggcaccacag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tectgtagtagetgtaggagagagetgeagtgeaegaggtgectaceceagattgag
tgcagggagtgtgagagcggctccttcaccgcttcagaaaaccacctcagacactgcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ttccagttgcttcaattgcagcctctgcctcaatgcgaccgttgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             agctgctccaaatgccgaaaggaaatgggtcaggtggagatctcttcttgcacagtggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGACACCGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                   ×
                                                                                                                                                                                                                                                                                                                                                                                                                  SUNLEY
M, Gray
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP
                                                                                                                                             Score 478; I
Pred. No. 0.0
0; Mismatcl
                                                                                                                                                                                                                                                                                                                                                                                                                   ₽W,
                                                                                                                                                                                                                                                                                                                                                                                                                   CENT.
                                                                                                                                              Mismatches
                                                                                                                                                         DB 4;
.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      858
                                                                                                                                                                                             5, Q29236-8
5 G; 336'
                                                                                                                                                                    Length 608
                                                                                                                                             Indels
                                                                                                                                                                                                H
                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AIDS;
                                                                                                                                            Gaps
                                                                248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       615
                                         464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          704
                                                                                                                                                                                                                                                                                                                ä
                                                                                                                                            0
```

```
RESULT RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
Query Match
Best Local S
Matches 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag= a
mat_peptide
/*tag= b
sig_peptide
/*tag= c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14-NOV-1991;
07-MAY-1991;
08-MAY-1990;
                                                                                          New glyco-protein hormone analogues - for inducing fertility as immuno-castration agents, for suppressing reproductive system development and as immuno-contragestive vaccines.

Example 3; Fig 4a; 94pp; English.

The sequence is an analogue of hCG beta subunit cDNA contg. two silent mutations which eliminate restriction sites. It was prepd. from the plasmid pRMB-hCG-beta, a construct contg. the hCG beta subunit isolated from human placenta (Fiddes and Goodman) in plasmid pRMB, a derivative of pCG8 designed to facilitate clining of glycoprotein hormones. The sequence was used as the starting construct for many mutants. (See R15061-R15125 and R15161-R15198). Sequence 579 BP; 128 A; 205 C; 151 G; 95 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-FEB-1992 (first entry)
Human chorionic gonadotropin beta subuni
Glycoprotein hormone; hGGB; fertility;
immuno-contragestive; vaccine; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T 13
Q14800 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                    (UYNE-) UNIV MED NEW Campbell RK, Moyle WR WPI; 91-353528/48.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="c -> g"
W09116922-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q14800;
11-FEB-1992
                                                                                                                                                                                                                                                                                                                                                                                                P-PSDB; R15043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tcctgtagtaactgtaagaaaagcctggaagtgcacgaagttgtgcctaccccagatttag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ttccagtgcttcaattgcagcctctgcctcaatgggaccgtgcacctctcctgccaggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cgggacaccgtgtgtggctgcaggaagaaccagtaccggcattattggagtgaaaacctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCTGTAGTAACTGTAAGAAAAGCCTGGAGTGCACGAAGTTGTGCCTACCCCAGATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCTTCTTGCACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCAGGGAGTGTGAGAGCGGCTCCTTCACCGCTTCAGAAAACCACCTCAGACACTGCCTC
     418;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ω
                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ċ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-520703
     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            524..579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            86..520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers 26..523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26..85
                           32.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JERSEY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP
                           Score 416; DB 3; L
Pred. No. 6.61e-279;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               beta subunit analogue
     Mismatches
                                               Length
     Indels
     0
     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 704
```

밁

104

ccacggtgccgcccatcaatgccaccctggctgtggagaaggagggctgccccgtgtgc 163

```
RESULT ACCORDED TO SELECT THE SEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= a
/transl_except=
sig_peptide
/*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mat_peptide
/*tag= c
P-PSDB; R86247.

Methods for altering fertility in mammals, esp. humans - e.g. stimulating fertility by reducing the activity and/or levels of circulating fertility by reducing the activity and/or levels of circulating glyco:protein hormones having lutropin activity Example 12; Fig 6; 102pp; English.

Analogue 1 (human CG-beta(1-145)-linker-human CG-alpha(1-92)) is a specific example of a single chain gonadotropin having a chorionic gonadotropin (CG) beta-subunit at the N-terminus and a CG alpha-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26-APR-1996 (first entry)
Single chain gonadotropin analogue 1 coding sequence.
Single chain gonadotropin; human chorionic gonadotropin;
Single chain gonadotropin; human chorionic gonadotropin;
alpha; beta; subunit; analogue; glycoprotein hormone; fer
inhibit; stimulate; increase; lutropin; luteinising hormo
follicle stimulating hormone; FSH; vaccine; contraceptive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note "nucleotides 93..527 encode aminual 1-145 of hCG beta-subunit; nucleotides 528..551 encode a (Gly-Ser)4 linker and nucleotides 552..827 encode amino acids 1-92 of gonadotropin alpha-subunit"
                                                                                                                                                                                                                                                                                                                                                                                     W09522340-A1.
24-AUG-1995.
17-FEB-1995; U02067.
18-FEB-1994; US-199382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note "single-strand overhang.
strand also has a single-strand
its 5'-end; the sequence of the
5'-TCCGGATTAGCTTGAGATGGATCC-3'"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /label- sticky_end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /label= Analogue_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gonadotropin a
ature 1..26
                                                                                                                                                                                                                                                                                                                                                            SENSI-TEST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pos:240..;
33..92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers 33..830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           93..827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .242,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The complementary overhang at overhang is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    contraceptive;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hormone;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     fertility;
```

```
Š
                                                                                                                                                                                  밁
                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                      VQ
VQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         នន្តន្តន្តន
                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    subunit at the C-terminus, joined by a linker of 1-16 amino at the analogue has luteinising hormone (lutropin) activity and useful for inducing ovulation increasing male fertility. The sequences coding for analogue 1 were cloned from a human placental cDNA library using strand overlap extension PCR. Sequence 836 BP; 166 A; 282 C; 222 G; 166 T;
                                                                                                                                                                                                           1110
                                                                                                                                                                                                                                                          1050
                                                                                                            1230
                                                                                                                                    471
                                                                                                                                                                                                                                  351
                                                                                                                                                                                                                                                                                                         990
                                                                                                                                                                                                                                                                                                                                 231
                                                                                                                                                                                                                                                                                                                                                         930
                                                                                                                                                                                                                                                                                                                                                                                                         870
                                                                                                                                                                                                                                                                                                                                                                                                                                 111
                                                                                                                                                                                                                                                                                                                                                                                 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  / Match
Local :
                                                                                                                                                                                                                                                                                                                                                                                                                      ccacggtgccgcccatcaatgccaccctggctgtggagaaggagggctgccccgtgtgc
                                                                                                           atcaccgtcaacaccatctgtgccggctactgccccaccatgacccgcgtgctgcag
                                                                                                                                                          atcoggctccctggctgcccgcgcgcgcgtgaaccccgtggtctcctacgccgtggctctc
                                                                                                                                                                                                                                                                                                                     ggggtcctgccggccctgcctcaggtggtgtgcaactaccgcgatgtgcgcttcgagtcc
                                                                                                                                                                                                                                                                                                                                                                                                         CCACGGTGCCGCCCATCAATGCCACCCTGGCTGTGGAGAAGGAGGGCTGCCCCGTGTGC
                                                                                                                                                                                                                                                                                                        GGGGTCCTGCCGGCCCTCCAGGTGGTGCAACTACCGCGATGTGCGCTTCGAGTCC
                                                                                                                                                                                                                                                                                                                                                        ATCACCGTCAACACCACCATCTGTGCCGGCTACTGCCCCACCATGACCCGCGTGCTGCAG
                                                                                                                                                                                                          ATCCGGCTCCCTGGCTGCCCGCGCGCGCGTGAACCCCGTGGTCTCCTACGCCGTGGCTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                         416;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 415;
Pred. No. 3.
0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .64e-278;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
fertility;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       is
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                  470
                                                                                                                                                                                                          1169
                                                                                                                                                                                                                                                         1109
                                                                                                                                                                                                                                                                                 350
                                                                                                                                                                                                                                                                                                        1049
                                                                                                                                                                                                                                                                                                                                290
                                                                                                                                                                                                                                                                                                                                                        989
                                                                                                                                                                                                                                                                                                                                                                                                         929
                                                                                                                                                                                                                                                                                                                                                                                                                              170
                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

β Q

404

8 8

344

1050

5 B 5

1230

464

agccttccaagcccatcccgactcccggggccctcggacaccccgatcctccacaataa

463 1229 523

AGCCTTCCAAGCCCATCCCGACTCCCGGGGCCCCTCGGACACCCCGATCCTCCCACAATAA

cccttgacctgtgatgacccccgcttccaggactcctcttcctcaaaggcccctccccc

CCCTTGACCTGTGATGACCCCCCCCTTCCAGGACTCCTCTTCCTCAAAGGCCCCTCCCCCC

1169

B 성

990 284

atccggctccctggctgcccgcgcggcgtgaaccccgtggtctcctacgccgtggctctc

ATCCGGCTCCCTGGCTGCCCGCGCGCGTGAACCCCGTGGTCTCCTACGCCGTGGCTCTC

1109

343

403

1049

989

5 8 8

164 930

atcaccgtcaacaccaccatctgtgccggctactgccccaccatgacccgcgtgctgcag

CCACGGTGCCGCCCATCAATGCCACCCTGGCTGTGGAGAAGGAGGGCTGCCCCGTGTGC

929

밁

224

```
ID T03243 standard; cDNA; 836 BP.

AT 03243, 1996 (first entry)
DT OB-MAY-1996 (first entry)
E Single chain gonadotropin analogue la coding sequence.
KW Single chain gonadotropin; human chorionic gonadotropin; hCG;
KW alpha; beta; subunit; analogue; glycoprotein hormone; fertility;
KW alpha; beta; subunit; analogue; lutropin; luteinising hormone; LH;
KW follicle stimulating hormone; FSH; vaccine; contraceptive; ds.
SS synthetic.

Location/Qualifiers
FH Key Synthetic.

Location/Qualifiers
FT /*tag= a

/transl_except= pos:240..242, aa:Arg
FT /*tag= b

FT /*tag= b

FT /*tag= c

Indel= nanlogue_la
/rote= "nucleotides 93..827

FT /*tag= c

Indel= nanlogue_la
/lobel= nucleotides 93..527 encode amino acids
FT 1-145 of hCG beta-subunit; nucleotides
FT 1-22 of gonadotropin alpha-subunit lacking
FT the glycosylation sites at amino acid
FT Misc_difference 705..707

FT /*tag= d
/note= "wild-type Asn 52 codon has been changed to a
FT /*tag= c
/*tag= c
/*tag= e
/*codon to remove a glycosylation sites of the codon to remove a glycosylation sites of changed to a
FT /*tag= c
/*tag= e
/*codon to remove a glycosylation sites of changed to a
/*codon to remove a glycosylation sites of changed to a
/*codon to remove a glycosylation sites of changed to a
/*codon to remove a glycosylation sites of changed to a
/*codon to remove a glycosylation sites of changed to a
/*codon to remove a glycosylation sites of changed to a
/*codon to remove a glycosylation sites of changed to a
/*codon to remove a glycosylation sites of changed to a
/*codon to remove a glycosylation sites of changed to a
/*codon to remove a glycosylation sites of changed to a
/*codon to remove a glycosylation sites of changed to a
/*codon to remove a glycosylation sites of changed to a
/*codon to remove a glycosylation sites of changed to a
/*codon to remove a glycosylation sites of changed to a
/*codon to remove a glycosylation sites of changed to a
/*codon to remove a glycosylation sites of changed to a
/*codon to remove a glycosylation sites of changed to a
/*codon to
```

```
Ş
                                                밁
                                                                                         Ş
                                                                                                                                             밁
                                                                                                                                                                            Ϋ́
                                                                                                                                                                                                                             B,
                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                                                                              B 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Weyle wr;

Noyle wr;

Noyle wr;

Now Presser Research

Now Presser

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag= f
/*tag= f
/*label= sticky_end
/label= stigle-strand overhang. The complementary
/note= "single-strand overhang at
strand also has a single-strand overhang at
its 5'-end; the sequence of the overhang is
5'-TCCGGATTAGCTTGAGATGGATCC-3'"
W09522340-al.
       1230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24-AUG-1995.
17-FEB-1995; U02067.
18-FEB-1994; US-199382.
(SENS-) SENSI-TEST.
                                                                                                                                                                                                                                                                                       1050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gln codon to misc_feature
                                                471
                                                                                                                                                                                                                                         351
                                                                                                                                                                                                                                                                                                                                                                                    990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          870
                                                                                                                                                                                                                                                                                                                                     291
                                                                                                                                                                                                                                                                                                                                                                                                                               231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ccacggtgccgcccatcaatgccacctggctgtggagaaggagggctgccccgtgtgc 170
                          agcettecaageccatecegacteceggggeceteggacacecegatectececeaa
                                                                                                                    cccttgacctgtgatgacccccgcttccaggactcctcttcctcaaaggcccctcccccc 470
                                                                                                                                                                                                                 atccggctccctggctgcccgcgcggcgtgaaccccgtggtctccctacgccgtggctctc
                                                                                                                                                                                                                                                                                                                                                                          ATCACCGTCAACACCACCATCTGTGCCGGCTACTGCCCCACCATGACCCGCGTGCTGCAG 989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 atcaccytcaacaccaccatctytyccyyctactyccccaccatyacccycytyctycag 230
                                                                                                                                                                                   ATCCGGCTCCCTGGCTGCCCGCGCGCGTGAACCCCGTGGTCTCCTACGCCGTGGCTCTC
                                                                                            CCCTTGACCTGTGATGACCCCCGCTTCCAGGACTCCTCTTCCTCAAAGGCCCCCTCCCCCC 1229
AGCCTTCCAAGCCCATCCCGACTCCCGGGGCCCTCGGACACCCCGATCCTCCCACAA 1286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ch 31.9%;
l Similarity 99.8%;
416; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         remove
1..2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          glycosylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 415; DB 17; 1
Pred. No. 3.64e-278;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 836;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                  1109
                                                                                                                                                                                                                                                                                                                                                                               1049
```

Search completed: Wed May 6 15:08:03 1998 Job time: 173 secs.

C 1 397 30.5 601 13 N32759 yw91b05.s1 Homo sapien 0.00e+00 C 2 391 30.1 537 13 N30276 yw69d04.s1 Homo sapien 0.00e+00 C 4 385 29.6 548 13 N30364 yw95d03.s1 Homo sapien 0.00e+00 C 5 383 29.4 593 13 N25730 yw80b11.s1 Homo sapien 0.00e+00 C 6 379 29.1 442 13 N3233 yw81f08.s1 Homo sapien 0.00e+00 C 7 379 29.1 566 13 N3233 yw81f08.s1 Homo sapien 0.00e+00 C 8 379 29.1 566 13 N30831 yw770b04.s1 Homo sapien 0.00e+00 C 9 377 29.0 563 13 N31955 yw89a07.s1 Homo sapien 0.00e+00 C 110 376 28.9 479 13 N30834 yw77h04.s1 Homo sapien 0.00e+00 C 111 373 28.7 473 25 AAA00910 xt71h09.s1 Soares test 0.00e+00 C 13 367 28.2 526 28 AA644163 af62d08.s1 Soares NhHM 0.00e+00	Statistics: Mean 11.285; Variance 2.123; scale 5.317  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.  SUMMARIES  Result Query  No. Score Match Length DB ID Description Pred. No.	atabase: emb1-est 1:em_e 6:em_e atabase: genbank: 10:gb 15:gb 20:gb 25:gb 29:gb	Searched: 1610801 segs, 607859669 bases x 2  Post-processing: Minimum Match 0%  Listing first 45 summaries	table: TABLE default Gap 6 STD : Dbase 0; Query 0	**************************************	
REFERENCE AUTHORS TITLE JOURNAL COMMENT	ORGANISM	ACCESSION NID KEYWORDS SOURCE	RESULT	C C	0 000000000000000000000000000000000000	0 0 1 1 4 0 2 2 1 1 4 0 2 2 1 1 4 0 2 2 1 1 4 0 2 2 1 1 4 0 2 2 1 1 4 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	oligo(dT) primer [5'-TGTTACCAATCTGAAGTGGGAGG double-stranded cDNA was si (Pharmacia), digested with RI sites of a modified pT77 constructed by Bento Soares M Homo sapiens Eukaryotae; Metazoa; Eumete Deuterostomia; Chordata; Ve Sarcopterygii; Choanata; Teate	N yw91b05.s CHORIOGON N32759 91153158 EST. human clo 8t09weeks poly1inke Rsite2-Ec weeks pos	1 N32759	24 17. 24 17. 24 17. 19 16.	315 24.2 307 23.6 308 23.1 309 23.1 300 23.1 300 23.1 22.9 22.9 22.9 22.9 22.5 22.7 22.5 22.7 21.5 22.6 21.5 27.6 21.2 27.6 21.2 27.6 21.2 27.6 21.2 27.6 21.2 27.6 21.2 27.6 21.3 21.6 21.9	56 27. 51 27. 50 26. 35 25. 31 25. 31 25. 119 24.
ss 1 to 601) L., Clark,N., Dubuc A., Hultman,M., Kucc A., Hultman,L., Roll J., Rifkin,L., Roll S.E., Waterston,R., D.Merck EST Project ST Project Con University Schoolest Park Parkway, F	primer CCAATCTCAAC CCAATCTCAAC randed CDN/ a), digeste of a modifi ed by Bentc ens e; Metazoa; omia; Chord ygii; Chord	1 Homo sapi ADOTROPIN E ne=259569 E 2NbHP8to9W 7 host-DH10 5 RI two DH10 t conception	601 bp	14	367 11 367 12 367 16 352 13 352 13 352 13 352 13 366 16 311 10 311 10 329 13 329 13 329 13 329 13 329 10 266 13 329 10 278 10 278 10	11331133
Dubuk M Kucz L Rohl ston,R ston,R project pect y Schoo ckway, E	GTGGGAGGA was sied with ied pT71 o Soares; Eumeta; Vedata; Vedata; Terimate	lens cDI BETA CHI primer=n vector vector ba (ampi lacentae	ALIGNME p mrr	3320	R68815 R68815 H914546 H87464 H87464 H87469 A39371 N27111 H874451 H874451 H87451 H87451 H87156 T47334 H93669 H93669 H93669 H93695 H93695 H93695 H93695 H93695 H93695 H93695 H93695	868273933 203149872

45	44	43	42	41	40	39	38	37	36	35	34	မှ	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14
$\vdash$	N	N	w	w	4	w	4	ú	G	σ	7	7	æ	æ	9	9	9	9	0	0	0	$\vdash$	$\vdash$	$\vdash$	$\vdash$	2	w	w	ū	351	S
	7.	7.	7.	œ.	<u>∞</u>	œ	œ	9	9	0	:	۲.		۲.	2	2	۲.		ω	ω	ω		٠.		4.	٠.	5	5	σ.	27.0	7.
5 1	0	<b>4</b> 1	11	80 11	9 2	8 1	11	გ 1	1 1	ω L	4	1 1	9	9	61	7 1	g N	0	2	7 1	9	7 1	6	5	4	21	11	31	11	419 16	0 2
335	C32	410	954	538	804	917	330	366	919	999	365	733	715	763	445	7111	393	029	746	444	258	881	082	060	83	321	074	639	198	H95374	232
07h10.s1 Homo sapi	apiens partial c	58h09.sl Soares pl	3815 Homo sapien	d07.s1 Soar	n placenta cDNA 5	9g02.rl Homo sapie	34462 Embryo, 6	5c12.s1 Homo sa	ap.	5b10.s1 Homo sap	5a11.s1 Homo s	ell.sl Homo sap	5b04.sl Homo sa	7e12.s1 Homo sapie	5g08.sl Soares pla	5h12.sl Homo sapie	1h09.rl Soares t	69f05.s1 Homo sa	17e05.s1 Homo sap	55f02.sl Soares p	2gll.sl Homo sap	c05.s1 Homo sapie	5h07.sl Homo sap	72c07.s1 Homo sap	w70b08.sl Homo sap	28a03.s1 Homo sap	74b04.s1 Homo sapie	76g11.s1 Homo sapie	3.sl Soares f	60b03.s1 Soares	c04.s1
.00€	00 00	00 6	00€	00 6	00 6	.00€	0	.00€	.006	00	00 8	00 6	00e	00 6	.00€	00	00 00	.00€	00e	.00€	00e	00 e	00 8	00 e	00e	မွ	00e	စု	00e	0.00e+00	00e

### ALIGNMENTS

ESULT 1	1 N32759 601 bp mRNA EST 10-JAN-1996	
EFINITION CCESSION IID IID	N YW91b05.s1 Homo sapiens cDNA clone 259569 3' similar to gb:J00117 CHORIOGONADOTROPIN BETA CHAIN PRECURSOR (HUMAN);. 1 N32759 N32758 EST.	
OURCE	human clone=259569 primer=m13 -40 forward library=Soares placenta 8to9weeks 2NbHP8to9W vector=pT7T3D (Pharmacia) with a modified polylinker host=pH10B (amploillin resistant) Rsite1=Not I Rsite2=Eco RI two placentae: one from 8 weeks and another from 9 weeks post conception. 1st strand cDNA was primed with a Not I - oligo(dT) primer [5'-TGTTACCAATCTGAAGTGGGAGCGGCGGGATTTTTTTTTT	•
ORGANISM	M Homo sapiens Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichthyes;	
EFERENCE AUTHORS		
TITLE JOURNAL OMMENT		
	Contact: Wilson RK WashU-Merck EST Project WashIngton University School of Medicine Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108	

```
mRNA
BASE COUNT
ORIGIN
  REFERENCE
                                                                                                                                                                                                                                                                                                                            RESULT
LOCUS
                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 41
                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                        989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTGCAGCACGCGGGTCATGGTGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTGAT 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCCGGCAGGACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCCGGCAAGACCCC 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGAGCCACGGCGTAGGAGACCACGGGGGTTCACGCCGCGGCGAGCCAAGGGAGCCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGGTCCTTGGGACCCC-GCAGTCAGTGGTGCTGCGGGGGGAGAGTGGACATTGACAGCT 195
                                                                                                                                                                                                                                                                                                                                                                                                          CTGCAGCACGCGGTCATGGTGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGAGCCACGGCGTAGGAGACCACGGGGTTCACGCCGCGCGGGCAGCCAGGGAGCCGGAT 1050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTGGTCCTTGGGACCCCCGCAGTCAGTGGTGCTGCCGGCGGCAGAGTGCACATTGACAGCT 1110
                                                                                                                                                                                                                                                                                                                                          N
                                                                           Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichthyes; Sarcopterygil; Choanata; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 537)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          High quality sequence stops: 387 Source: IMAGE Consortium, LLNL Free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Location/Qualifiers
                                                                    Homo sapiens
                                                                                                                                                                                                                                                                               yw69d04.sl Homo sapiens cDNA clone 257479 3' similar to CHORIOGONADOTROPIN BETA CHAIN PRECURSOR (HUMAN);.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   314 286 1800
314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30.5%;
larity 97.9%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>^</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/clone="259569"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .>601
154 c
                                                                                                                                                                                                                                                                                                                          ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 397; DB 13;
Pred. No. 0.00e+00;
0; Mismatches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               219
                                                                                                                                                                                                                                                                                                                            mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 601;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               others
                                                                                                                                                                                                                                                                                                                          05-JAN-1996
                                                                                                                                                                                                                                                                                               gb:J00117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                870
                                                                                                                                                                                                                                                                                                                                                                                                                                      930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            255
```

f

밁 ç 밁 မှ မှ

밁 င္ပ 밁

밁

밁 မှ 밁

ဌ

```
mRNA
BASE COUNT
ORIGIN
   KEYWORDS
SOURCE
                               ACCESSION
NID
                                                                                                         RESULT
LOCUS
                                                                                                                                                                    မှ
                                                                                                                                                                                                                             ဌ
                                                                                                                                                                                                                                                          멂
                                                                                                                                                                                                                                                                                       င္ပ
                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                    င္မ
                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                              င္
                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ç
                                                                                                                                                                                                  용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1050
                                                                                                                                                                                                                                                                                                                                                                                                                 1109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                  255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       137
                                                                                                                                                                      871
                                                                                                                                                                                                                                                                                             990
                                                                                                                                                                                                                                                                                                                                                                                                                                             196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17
                                                                                                                                                                                                                                              ATGCACACGGGGCAGCCCTTCCTCCACAGCCAGGGTGGCATTGATGGGGCGGCANCGT
                                                                                                                                                                                                                                                                                                        CCCTGCAGCACGCGGGTCATGGTGGGGGCAGTAACCGGCACAGATGGTGGTGTTGACGGTG
                                                                                                                                                                                                                                                                                                                                                                     TGGACTCGAAGCGCACATCGCGGTAGTTGCACACCTGAGGCAGGGCAGGGCCGGCAAGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGGGGAGGGCCTTTGAGGAAGAGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                    GGACCAGCACCAGCTGTGGTGCC
                                                                                                                                                                                                  GGCNAAGCGGCTCCTTGGATGCC 457
                                                                                                                                                                                                                             CC-TGCAGCACGCGGTCATGGTGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTG
                                                                                                                                                                                                                                                                                                                                                    TGGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCCGGCAGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                              GAGAGCCACGGCGT-AGGAGACCACGGGGGTTCACGCCGCGGGGGAGCCAGGGAGCCGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGAGCCACGGCGTTAGGAGACCACGGGGGTTCACGCCGCGCGG-CAGCCAGGGAGCCGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTGGTCCTTGGGACCCCCGCAGTCAGTGGTGCTGCCGCCGCCAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGGTCCTTGGGACCCC-GCAGTCAGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Wilson RK
WashU_Merck EST Project
Washington University Schoo
4444 Forest Park Parkway, B
Tel: 314 286 1800
Fax: 314 286 1810
yw95d03.sl Homo sapiens cDNA clone 259973 3' similar CHORIOGONADOTROPIN BETA CHAIN PRECURSOR (HUMAN);. N32604 91153003 EST.
human clone=259973 primer=m13 -40 forward library-Soa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ch 30.1%;
l Similarity 96.2%;
426; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Source: IMAGE Consortium, LLNL
This clone is available royalty-free through
IMAGE Consortium (info@image.llnl.gov) for fo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M. Parsons,J., Rikkin,L., Rohlfing,T., Soares,M., Tan,F., Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and
                                                                                                          N32604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: est@watson.wustl.edu
High quality sequence stops:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The WashU-Merck EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/clone="257479"
<1. .>537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
1. .537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   145 c
                                                                                                         564
                                                                                                         ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 391; DB 13;
Pred. No. 0.00e+00;
0; Mismatches 13
                                                                                                                                                                    849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            School of Medicine way, Box 8501, St.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 201 g
                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90
 forward library-Soares
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 537;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           further
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LLNL ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                         10-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Marra, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       contact the
                                                                           ៥
                                                                         gb:J00117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                            434
                                                                                                                                                                                                                                                                                                                                                                                                              1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1230
                                                                                                                                                                                                                             872
                                                                                                                                                                                                                                                                                          932
                                                                                                                                                                                                                                                                                                                        374
                                                                                                                                                                                                                                                                                                                                                     991
                                                                                                                                                                                                                                                                                                                                                                                314
                                                                                                                                                                                                                                                                                                                                                                                                                                            254
```

```
mRNA
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1289
                                                                                                                                                                                                                       1109
                                                                                                                                                                                                                                                                                                   1169
                                                                                                                                                                                                                                                                                                                                                                                  1229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                          1049
                                                                                                                                                                             256
                        375
                                                                                                                                                                                                                                                            196
                                                                                                                                                                                                                                                                                                                                           137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17
                                                                                                                                                                                                                                                                                                                                                                                                                         77
                                                                                                                                                                                                                                                                                                                                                                                                   GGGGGGAGGGCCTTTGAGGAAGAGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGGCGCACCGTG
                                                                                                                                                             GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCCGGCAAGACCCCC
                                                                                                                                                                                                                                                          GAGAGCCACGGCGTAGGAGACCACGGGGTTCACGCCGCGGCGGCAGCCAAGGGAGCCGGAT 255
                                                                                                                                                                                                                                                                                                                                       GTGGTCCTTGGGACCCC-GCAGTCAGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCT 195
                                                                                                                                                                                                                                                                                                                                                                              GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGATGGAATGGAAGGCT 76
                                                                                                 CTTGCAGCACGCGGTCATGGTGGGGCAGTAGC-GGCACAGATGGTGGTGTTGACGGTGA 374
                                                                                                                                        GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCCGGCAGGACCCC
                                                                                                                                                                                                                     GAGAGCCACGGCGTAGGAGACCACGGGGGTTCACGCCGCGCGGGCAGCCAGGGAGCCGGAT
                                                                                                                                                                                                                                                                                                 GTGGTCCTTGGGACCCCCGCAGTCAGTGGTGCTGCTGCGGCGGCAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             413;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WashU-Merck EST Project
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eutheria: Archonta; Primates; Catarrhini;

1 (bases 1 to 564)

Hillier, L., Clark, N., Dubuque, T., Elliston
Holman, M., Hultman, M., Kucaba, T., Le, M., L
Parsons, J., Rifkin, L., Rohlfing, T., Soares
Trevaskis, E., Waterston, R., Williamson, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            High quality sequence stops: 364
Source: IMAGE Consortium, LINL
This clone is available royalty-free tl
IMAGE Consortium (info@image.llnl.gov)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Ossarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        double-stranded cDNA was size selected, ligated to Eco RI adapters (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of a modified pT7T3 vector (Pharmacia). Library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  polylinker host-DH10B (ampicillin resistant) Rsitel-Not I Rsite2-Eco RI two placentae: one from 8 weeks and another from weeks post conception. 1st strand cDNA was primed with a Not I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Wilson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8to9weeks 2NbHP8to9W vector=pT7T3D (Pharmacia) with a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The WashU-Merck EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       constructed by Bento Soares and M. Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo (
/clone="259973"
<1. .>564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29.7%;
97.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 387; DB 13;
Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        206 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Williamson, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Elliston, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Soares,M., Tan,F.,
son,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 through LLNL; contact the
v) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 564;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lennon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hawkins, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ,G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Marra, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Osteichthyes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Theria;
                                                                                                                                                                             315
                                                                                                                                                                                                                   1050
                                                                                                                                                                                                                                                                                               1110
                                                                                                                                                                                                                                                                                                                                                                              1170
                    434
                                                            931
                                                                                                                                        990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ıω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω
••
```

밁

ဝှ 밁 ဌ 밁 မှ 밁 င္မ 밁 ç 밁 ç

밁

```
ç
                                                                                      밁
                                                                                                                       ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Сþ
                   밁
                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                             mRNA
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                           Matches
                                                      1229
                                                                                                                       1289
                                                                                                                                                                                                                                                                                                                                                 source
                   138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    930
                                                                                                                                                         18
                                                                                      78
                   GTGGTCCTTGGGACCCC-GCAGTCAGTGGTGCTGCCGGCGGCAGAGTGCACATTGACAGCT 196
                                                                    GGGGGGAGGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 137
                                                                                                                       TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT 1230
                                                                                                                                                     TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCNA 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGGCGGCACCGTG
g1148556
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hillier,L., Clark,N., Dubuque,T., El
Holman,M., Hultman,M., Kucaba,T., Le
Parsons,J., Rifkin,L., Rohlfing,T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osi
Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia;
Eutheria; Archonta; Primates; Catarrhini; Hominidae; Ho
1 (bases 1 to 548)
1 (bases 1 to 548)
1 (Clark, N., Dubuque, T., Elliston, K., Hawkins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       double-stranded cDNA was size selected, ligated to Eco RI a (Pharmacia), digested with Not I and cloned into the Not I RI sites of a modified p7773 vector (Pharmacia). Library constructed by Bento Soares and M. Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           polylinker host-DH10B (ampicillin resistant) Rsitel-Not I Rsite2-Eco RI two placentae: one from 8 weeks and another from weeks post conception. 1st strand cDNA was primed with a Not I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N3003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           yw80b11.s1
                                                                                                                                                                                                                                                                                                                                                                              Source: IMAGE Consortium, LLNL ; This clone is available royalty-free through LLNL ; IMAGE Consortium (info@image.llnl.gov) for further ;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: est@watson.wustl.edu
High quality sequence stops:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Washington University Scho 4444 Forest Park Parkway,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Wilson RK
WashU-Merck EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The WashU-Merck EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Trevaskis, E., Waterston, R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human clone-258525 primer-m13 -40 forward library-Soares 8to9weeks 2NbHP8to9W vector-pT7T3D (Pharmacia) with a moc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHORIOGONADOTROPIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N30036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  866
                                                                                                                                                                                                                                                                             99
                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/clone="258525"
<1. .>548
                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
DOTROPIN BETA
                                                                                                                                                                                                        29.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1995)
                                                                                                                                                                                                                                                                             .>548
143 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Project
                                                                                                                                                                                      Score 385; 1
Pred. No. 0.0
0; Mismatcl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         School of Medicine way, Box 8501, St.
                                                                                                                                                                                                                                                                             206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHAIN PRECURSOR (HUMAN);.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA
                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               fing,T., Soares,M., Tan,F.,
Williamson,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                             93
                                                                                                                                                                                                        DB 13;
.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Le,M., Lennon,G., Ma
., Soares,M., Tan,F.,
                                                                                                                                                                                        <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Louis,
                                                                                                                                                                                                                        Length 548;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hominidae; Homo.
                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                             others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           similar to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hawkins, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                    information
                                                                                                                                                                                      4;
                                                                                                                                                                                                                                                                                                                                                                                                    contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Osteichthyes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Marra, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Theria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RI adapters
                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gb:J00117
                                                                                                                                                         77
                                                      1170
                                                                                                                                                                                        4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     , 6
```

```
JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           දි
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ද
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ç
    BASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
 COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1109
                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTTGCAAGCACGCGGGTCATGGTGGGGCAGATAGCCGGCACAGATGGTGTGTTGACGGT 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATGNACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGGCGCCACCG 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCCGGCAGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGAGCCACGGCGTAGGAGACCACGGGGGTTCACGCCGCGCGGGCAGCCA-GGGAGCCGGA 1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTGGTCCTTGGGACCCCCGCAGTCAGTGGTGCTGCCGCGGCAGAGTGCACATTGACAGCT
                                                                     Contact: Wilson RK
WashIn-Merck EST Project
WashIngton University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1810
Fax: 314 286 1810
Email: est@watson.wustl.edu
High quality sequence stops: 368
Source: IMAGE Consortium, LLNL
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                              Eutheria; Archonta; Primates; Catarrhin; Hominidae; Homo.

1 (bases 1 to 593)

Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M.,
Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M
Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F.,
Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                                                                                               Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichthyes;
Sarcopterygil; Choanata; Tetrapoda; Amniota; Mammalia; Theria;
Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            yw78h03.s1 Homo sapiens cDNA clone 258389 3' similar to gb:J00117 CHORIOGONADOTROPIN BETA CHAIN PRECURSOR (HUMAN);.
                                                                                                                                                                                                                                        The WashU-Merck EST Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human clone-258389 primer-mi3 -40 forward library-Soares placenta 8to9weeks 2NbHP8tc9W vector-pri713D (Pharmacia) with a modified polylinker host-DH10B (amploillin resistant) Rsitel-Not I Rsite2-Eco RI two placentae: one from 8 weeks and another from 9
                                                                                                                                                                                                                                                                                                                                                                                      Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     870
  109
           /organism-"Homo sapiens"
/clone-"258389"
<1. .>593
                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ģ
                                                                                                                                                                                                                                                      Project
216
g
111
4
σ
others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tel-Not I
d another from
d with a Not I
                                                                                                                                                                                                                                                                                                         Marra, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                           RI adapters
ot I and Eco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . .
         TITLE
JOURNAL
COMMENT
                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     င္မ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                င္မ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     င္
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             င္မ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                              POCAR
                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Loca1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGACCAGCACCAGCTGTGGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGCCAAGCGGCTCCTTGGATGCC
               Wilson, R.
The WashU-Merck EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     422;
                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                              442
                                                                                                                                                                                                                                                                                                                                                                                                                            ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           458
```

```
18 TIATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGAGCCACGGCGTAGGAGACCACGGGGTTCACGCCGCGNGG-CAGCCAGGGAGCCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGGGGAGGGCCTTTGAGGAAGAGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGGTCCTTGGGACCCC-GCAGTCAGTGGTGCTGCGGGGGGAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGCAGCACGCGGTCATGGTTGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCGGCAAGACCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGAGCCACGGCGTAGGAGACCACGGGGTTCACGCCGCGCGGGCAGCCAGGGAGCCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGGTCCTTGGGACCCCCGCAGTCAGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGGGGAGGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                  Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 442)

Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M.,

Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M.,

Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F.,

Parsons, J., Rifkin, E., Rohlfing, T., Soares, M., Tan, F.,

Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and
                                                                                                               Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Os: Sarcopterygii; Choanata; Tetrapoda; Amnota; Mammalia; Eutheria; Archonta; Primates; Catarrhini; Hominidae; Ho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         yw81f08.sl Homo sapiens cDNA clone 258663 3' similar CHORIOGONADOTROPIN BETA CHAIN PRECURSOR (HUMAN);.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 383; DB 13; I
Pred. No. 0.00e+00;
0; Mismatches 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 593;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-JAN-1996
                                                                                                                                                             Osteichthyes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ៩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gb:J00117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           255
```

```
mRNA
BASE COUNT
ORIGIN
                                                                                                                                  KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                 RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         197
                                                                                                                                                                                                                                                                                                                                                                                                                                      317
                                                                                                                                                                                                                                                                                            870
                                                                                                                                                                                                                                                                                                                      437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGATGGACTTGGAAGGCT 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGGTCCTTGGGACCCCGCAAGTCAGTTGGTGCTGCGGCGGCAGAGTGCACATTGACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGGTCAAGGG 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTTGGAAGGCT 1230
                                                                                                                                                                                                                                                                                            GACCA
                                                                                                                                                                                                                                                                                                                     GCCCA 441
                                                                                                                                                                                                                                                                                                                                                 TGCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGCGGCACCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                       CCTGCAGCACGCGGGTCATGGTGGGGCAGTAACCGGCACAGATGGTGGTGTTGACGGTNA 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCCAGGGCGNCAAGACCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGGTCCTTGGGACCCCCGCAGTCAGT-GGTGCTGCGGCGGCAGAGTGCACATTGACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                                                                                                                             TGCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGCGGCANCGTG
402;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           High quality sequence stops: 364
Source: IMAGE Consortium, LLNL
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Washington University School
4444 Forest Park Parkway, Bc
Tel: 314 286 1810
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                        yw71f12.s1 Homo sapiens
CHORIOGONADOTROPIN BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WashU-Merck EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29.1%;
larity 94.6%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/clone="258663"
<1. .>442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .>442
110 c
                                                                                                                                                                                                                                  đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 379; DB 13; Pred. No. 0.00e+00; 0; Mismatches 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              174 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    School of Medicine way, Box 8501, St. 1
                                                                                                                                                                                     cDNA clone 257711 3' similar CHAIN PRECURSOR (HUMAN);.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 442;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ğ
                                                                                                                                                                                                     ៥
                                                                                                                                                                                                     gb:J00117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1170
                                                                                                                                                                                                                                                                                                                                                                             436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                316
```

밁

밁 ç 밁 မှ 밁 Сþ 밁 င္မ 밁 င္ပ

ဌ 밁 င္မ 밁 ç

```
mRNA
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                 ဌ
                                                                                                                                                                                                                         ç
                                                                                                                                                                                                                                                                                 ဌ
                                                                                                                                                                                                                                                                                                                                       Сþ
                                                                                                                                                                                                                                                                                                                                                                     엉
                                                                                                                                                                                                                                                                                                                                                                                              င္ပ
                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ф
                                                                                  밁
                                                                                                           ç
                                                                                                                                        밁
                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                          1289
                                                                                                                                                                                                                           1049
                                                                                                                                                                                                                                                                                  1109
                                                                                                                                                                                                                                                                                                                                         1169
                                                                                                                                                                                                                                                                                                                                                                                                  1229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                             198
                                                       870
                                                                                  437
                                                                                                              930
                                                                                                                                          377
                                                                                                                                                                    989
                                                                                                                                                                                                317
                                                                                                                                                                                                                                                       257
                                                                                                                                                                                                                                                                                                                                                                                                                                                       78
                                                                                  ရ
                                                                                                                                                                                                                                                                                                                                                                                                           GGGGGGAGGGGCCTTTGAGGAAGAGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 137
                                                      G
                                                                                                                                                                                                                         GTGGTCCTTGGGACCCCGCCAGTCAGTGGTGCTGCTGCGGCGGCAGAGTGCACATTGACAGCT 197
              œ
                                                                                                                                        TGCACACGGGGCAGCCCNCCTTCTCCACAGCCAGGGTGGCATTGATGGGGGCGGCACCGTN 436
                                                                                                                                                                    CTGCAGCACGCGGGTCATGGTGGGGCAGTAGCCGG
                                                                                                                                                                                TTGCAGCACGCGGGTCATGGTGGGGCAGTANCCGGGCACAGATGGTGGTGTTNACGGTGA
                                                                                                                                                                                                                                                                                                             GAGAGCCACGGCGTAGGAGACCACGGGGTTCACGCCGCGGGG-CAGCCAGGGANCCGGAT 256
                                                                                                                                                                                                                                                                                                                                         GGGGGGAGGGGCCTTTGAGGAAGAAGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 1170
                                                                                                              TGCACACGGGGCAGCCCTCCTTCTCCACAGGCCAGGGTGGCATTGATGGGGGCGGCACCGTG
                                                                                   437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Wilson RK
WashU-Merck EST Project
WashIngton University School of Medicine
4444 Forest Park Parkway, Box 8501, St. I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryotae: Metazoa; Eumetazoa; Bilaterila: Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Os Sarcopterygli; Choanata; Tetrapoda; Amniota; Mammalia; Eutheria; Archonta; Primates; Catarrhini; Hominidae; H 1 (bases 1 to 473)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                constructed by Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tel: 314 286 1800
Fax: 314 286 1810
Email: estewatson.wustl.edu
High quality sequence stops:
Source: IMAGE Consortium, LLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The WashU-Merck EST Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M., Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M., Parsons, J., Rikkin, L., Rohlfing, T., Soares, M., Tan, F., Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     clone is available royalty-free through LLNL; E Consortium (info@image.llnl.gov) for further in Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/clone="257711"
<1. .>473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29.1%;
95.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .>473
122 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bento
ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 379; DB 13;
Pred. No. 0.00e+00;
0; Mismatches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Soares and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       182
 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                M. Fatima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bonaldo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Marra, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Osteichthyes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Theria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                         1110
                                                                                                                                                                      931
                                                                                                                                                                                                376
                                                                                                                                                                                                                            990
                                                                                                                                                                                                                                                       316
```

```
TITLE
JOURNAL
COMMENT
ç
                                                                                           밁
                                                                                                                          f
                                                                                                                                                                                                                                                     ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                               8
                                                            မှ
                                                                                                                                                         밁
                                                                                                                                                                                     ဌ
                                                                                                                                                                                                                       뮻
                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                 mRNA
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
   1050
                                                                                                                                                                                                                                                      1289
                                                              1109
                                                                                                                            1169
                                                                                                                                                                                          1229
                                256
                                                                                             196
                                                                                                                                                           137
                                                                                                                                                                                                                       77
                                                                                                                                                                                                                                                                                     17
                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                         GGGGGGAGGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 136
                                                                                                                                                                                                                                                                   TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCCGGGAGTCGGGATGGACTTGGAAGGCT 76
              TGGACTCGAAGCGCAAATCGCGGGTAGTTGCACACCACCTGAGGCAGGGCGGCCAGACCC
                                                                           GTGGTCCTTGGG-CCCCCGCAGTCAGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCT 195
                                                                                                                                                                                                                                                   TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT 1230
                                                            GAGAGCCACGGCGTAGGAGACCACGGGGTTCACGCCGCGGGGGAGCCA-GGGAGCCGGA 105
                                                                                                                        GTGGTCCTTGGGACCCCCGCAGTCAGTGGTGCTGCCGCCGCCAGAGTGCACATTGACAGCT 1110
                                                                                                                                                                                       GGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
TGGACTCGAAGCGCACATCGCGG-TAGTTGCACACCACCTGAGGCAGGGCCGGCAGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               yw70b04.sl Homo sapiens c
CHORICGONADOTROPIN BETA C
N30831
g1149351
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Verrebrata; Gnathostomata; Osteichthyes; Sarcopteryqii; Choanata; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 566)

Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M., Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M., Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F., Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      High quality sequence stops: 400 Source: IMAGE Consortium, LLNL free through LLNL; contact the This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Wilson RK
WashU-Merck EST Project
WashU-Merck EST Project
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The WashU-Merck EST Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                 103
                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/clone="257551"
<1. .>566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                 29.1%;
                                                                                                                                                                                                                                                                                                                                                                                                 .>566
148 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Project
                                                                                                                                                                                                                                                                                                                                Score
Pred.
                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHAIN PRECURSOR (HUMAN);.
                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                 379; DB 13;
No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                 100
                                                                                                                                                                                                                                                                                                                                                                                                 rt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Louis,
                                                                                                                                                                                                                                                                                                                                                Length 566;
                                                                                                                                                                                                                                                                                                                                                                                                 σ
                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₹
                                                                                                                                                                                                                                                                                                                 <u>ω</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RI adapters
                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gb:J00117
                                                                                                                                                                                     1170
992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ø
                                                                                                                                                                                                                                                                                                                 Ψ
```

```
MRNA
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
LOCUS
 ဌ
                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           F
                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                       Query Match
Best Local Similarity
Matches 418; Conse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
 1289
                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       991 CCCTGCAGCACGCGGTCATGGTGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTG
                                     17
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ရူ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGCACACGGGCCAGCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGCGGCACCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCTGCAGCACGCGGGTCATGGTGGGGGCAGTAGCGGTCACAGATGGTGGTGTTGACGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GG 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGCGGCACCGT 435
                                                                                                                                                                                                                                                                                                                                                                    Contact: Wilson RK
WashU-Merck EST Project
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. I
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryoiae; Metazoa; Eumetazoa; Bilateria; Coelomata;
Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteicht
Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia; Thori
Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 563)
Hillier,L., Clark,N., Dubuque,T., Eliston,K., Hawkins,M.,
Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M.
Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F.,
Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human clone=259380 primer=ml3 -40 forward library=Soares placenta 8to9weeks 2NbHP8tc9W vector=PT73D (Pharmacia) with a modified polylinker host=DH10B (ampicillin resistant) Rsite1=Not I Rsite2=Eco RI two placentae: one from 8 weeks and another from 9 weeks post conception. 1st strand cDNA was primed with a Not I -
                                                                                                                                                                                                                                                  High quality sequence stops: 335
Source: IMAGE Consortium, LLNL; contact the
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The WashU-Merck EST Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       double-stranded cDNA was size selected, ligated to Eco RI adapters (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of a modified pT7T3 vector (Pharmacia). Library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N31955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   yw89a07.s1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        constructed by Bento Soares and M. Fatima Bonaldo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHORIOGONADOTROPIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N31955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             870
                                                                                                                                                                                                                                                                                                                                                   Email: est@watson.wustl.edu
                                                                                                                                                                  101
                                                                      29.0%;
larity 97.4%;
Conservative
                                                                                                                                                                  ø
                                                                                                                                                                              /organism="Homo sapiens"
/clone="259380"
<1. .>563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens cDNA clone 259380 3' similar DOTROPIN BETA CHAIN PRECURSOR (HUMAN);.
                                                                                                                                                                  .>563
148 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       563
                                                                                                                                                                  o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Project
                                                                       Score
Pred.
0; M
                                                                                                                                                                  208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA
                                                                                                                                                               9
                                                                         Mismatches
                                                                                         377; DB 13;
No. 0.00e+00;
                                                                                                                                                                  103
                                                                                                                                                                  đ
                                                                                                                                                                                                                                                                                                                                                                                                         Louis,
                                                                                                           Length
                                                                                                                                                                  w
                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                           MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-JAN-1996
                                                                         6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Osteichthyes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ៩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Theria;
                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gb:J00117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           375
                                                                         6,
```

```
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
NID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ද
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            င္မ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               င္ပမ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ද
                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Çþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10
                                 Contact: Wilson RK
WashU-Merck EST Project
WashIngton University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Lov
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
High quality sequence stops: 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCC-TGCAGCACGCGGGTCATGGTGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATGCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGCGGCACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGCCAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGAGAGCCACGGCGT-AGGAGACCACGGGGTTCACGCCGCGGGCAGCCA-GGGAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGACCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The
                                                                                                                                                                                                                                                                                    Holman,M., Hultman,M., Kucaba,T., Le,M., Li, Parsons,J., Rifkin,L., Rohlfing,T., Soares, Trevaskis,E., Waterston,R., Williamson,A., Wilson,R.
                                                                                                                                                                                                                                                                                                                                                               Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Ost Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia; Eutheria; Archonta; Primates; Catarrhini; Hominidae; Ho 1 (bases 1 to 479)
Hiller,L., Clark,N., Dubuque,T., Elliston,K., Hawkins, Uchman M. Finchen M. Fin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             yw77h04.s1
Source: IMAGE Consortium, LLNL This clone is available royalty-free
                                                                                                                                                                                                                                             Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N30684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      yw77h04.sl Homo sapiens
CHORIOGONADOTROPIN BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N30684
                                                                                                                                                                                                                                         WashU-Merck EST ublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ď
                                                                                                                                                                                                                                                                  Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clone 258295
N PRECURSOR (1
                                                                                                                                                                                                                                                                                               Le,M., Lennon,G., Marra,M.
., Soares,M., Tan,F.,
amson,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                                                                                                                        Elliston, K., Hawkins, M.,
through
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    95 3' similar (HUMAN);.
                                                                                                                                 Louis,
LLL
                                                                                                                                   ð
                                                                                                                                   63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Osteichthyes;
  contact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ç
                                                                                                                                                                                                                                                                                                                                                                                                                     HOMO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RI adapters
ot I and Eco
                                                                                                                                                                                                                                                                                                                                                                                                                                     Theria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gb:J00117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1170
```

```
mRNA
BASE COUNT
ORIGIN
                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    င္မ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                              RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                   ç
                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       င္ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                          ဌ
                                                                                                                                                                                                                                                             NID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1049
                                                                                                                                                                                                                                                                                                                                                                          929
                                                                                                                                                                                                                                                                                                                                                                                                375
                                                                                                                                                                                                                                                                                                                                                                                                                    989
                                                                                                                                                                                                                                                                                                                                                                                                                                           315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          77
                                                                                                                                                                                                                                                                                                                                         11
                                                                                                                                                                                                                                                                                                                                                                         GTGGTCCTTGGGACCCC-GCAGTCAGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGCAGCACGCGGGTCATGGTGGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                               TTGCAGCACGCGGGTCATGGTGGGGCAGTAGCCGGCACAGATGGTGGTGTTNACGGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                                            zt71h09.s1
similar to
                                                                                                                                                                                                                                                  g2054783
EST.
                                                                                                                                                                                                                                                                       (HUMAN);.
AA400910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            403;
                                                                                                                      1 (bases 1 to 473)
Hilller,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising, White,Y., Wylie,T., Waterston,R. and Wilson,R.
Washl-Merck EST Project 1997
Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 640 Std Error: 0.00
                                            Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. 1 Tel: 314 286 1810

Fax: 314 286 1810
                                                                                                                                                                                                    Eukaryotae;
Vertebrata;
                                                                                                                                                                                                                           Homo sapiens
                                                                                         Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                              AA400910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IMAGE
                                                                                                                                                                                                                                       human .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28.9%;
larity 96.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Consortium (info@image.llnl
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo (
/clone="258295"
<1. .>479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .479
                                                                                                                                                                                                                                                                                            Soares testis NHT Homo sapiens cDNA clone 727841 gb:J00117 CHORIOGONADOTROPIN BETA CHAIN PRECURSOR
                                                                                                                                                                                                    mitochondrial eukaryotes; Metazoa; Chordata; Mammalia; Eutheria; Primates; Catarrhini; Hc
                                                                                                              (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .>479
122 c
                                                                                                                                                                                                                                                                                                                              473
                                                                                                                                                                                                                                                                                                                            đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 376; 1
Pred. No. 0.0
0; Mismatcl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    184
                                                                                                                                                                                                                                                                                                                              mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 13;
.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .gov)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for
                                                                   Louis,
                                                                                                                                                                                                                                                                                                                              EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   œ
                                                                                                                                          Geisel,G., Journal, M., Martin,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     further information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   others
                                                                   8
                                                                                                                                                                                                                                                                                                                              12-AUG-1997
                       contact the
                                                                                                                                                                                                      Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                   930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1170
                                                                                                                                                                                                                                                                                                                                                                                               434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  255
                                                                                                                                                                                                                                                                                                                                                                          871
                                                                                                                                                                                                                                                                                                                                                                                                                                          374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      314
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     င္မ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  င္ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ဝှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                SOURCE
                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                         FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                       12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTATTGTGGGAGGATCGGGGTGTCTGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGCGGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGGGGAGGGGCCTTTGAGGAAGAGAGGCCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGCAGCACGCGGGTCATGGTGGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGAGCCACGGCGTAGGAGCCACGGGGTTCACGCCGCGGGGGAGCCAGGCAGCCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTGGTCCTTGGGACCCCCGCAGTCAGTGGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGGTCCTTGGGACCCC-GCAGTCAGTGGTGCTGCGGCGCGCAGAGTGCACATTGACAGCT 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCCGGCAGGACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGAGCCACGGCGTAGGAGACCACGGGGTTCACGCCGCGCGG-CAGCCAGGGAGCCGGAT 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGGGGAGGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT 1230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGGCGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -TGCAGCACGCGGGTCATGGTGGGGCAGTAGC-GGCACAGATGGTGGTGTTGACGGTGAT 374
   weeks post
oligo(dT) p
                                    g1152015
EST.

EST.

Auman clone=258890 primer=m13 -40 forward library=Soares placenta human clone=258890 vector=pf773D (Pharmacia) with a modified 8tc9weeks 2NbHP8tc9W vector=pf773D (Pharmacia) with a modified 9colylinker host=DH10B (ampicillin resistant) Rsite1-Not I Rsite2-Eco RI two placentae: one from 8 weeks and another from 9 Rsite2-Eco RI two placentae: one from 8 weeks and another from 9 Rsite2-Eco RI two placentae: one from 8 weeks and another from 9 Rsite2-Eco RI two placentae: one from 8 weeks and another from 9 Rsite2-Eco RI two placentae: one from 8 weeks and another from 9 Rsite2-Eco RI two placentae: one from 8 weeks and another from 9 Rsite2-Eco RI two placentae: one from 8 weeks and another from 9 Rsite2-Eco RI two placentaes: one from 9 Rsite2-Ec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               406;
                                                                                                                                                                                                                                                                                       yw84a02.sl Homo sapiens
CHORIOGONADOTROPIN BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 primer: -41m13 fwd. ET from h quality sequence stop: 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/note="Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; 1st strand was prepared from mRNA obtained from Clonted to the prepared from mRNA obtained from Clonted to the prepared from the prepared from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement(<1. .>473)
/db_xref="GDB:5924752"
120 c 190 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Laboratories, Inc., and primed with a Not I - oligo(dT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:9606"
/clone="727841"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_lib="Soares testis NHT"
                                conception. 1st strand cDNA was primed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28.7%;
97.8%;
                                                                                                                                                                                                                                                                                                                                                                                      446
                                                                                                                                                                                                                                                                                                                                                                                   đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
Pred.
                                                                                                                                                                                                                                                                                       CHAIN C
                                                                                                                                                                                                                                                                                                                                                                                      mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      373; DB 25;
NO. 0.00e+00;
                                                                                                                                                                                                                                                                                   clone 258890 3' similar
N PRECURSOR (HUMAN);.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.
                                                                                                                                                                                                                                                                                                                                                                                   EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ,...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                   10-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>ن</u>
                                                                                                                                                                                                                                                                                                                    ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Library
5, and was
aldo."
                                                                                                                                                                                                                                                                                                                 gb:J00117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the Not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MRNA
BASE COUNT
ORIGIN
                                                                                                                                                                                       밁
                                                                                                                                                                                                                                               ဌ
                                                                                                                                                                                                                                                                                                                                                                         င္ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ç
                                                           밁
                                                                                                               င္မ
                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1289
                                                                                                                                                                                                                                                                                                                                                                               1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       196
870
                                                           434 G 434
                                                                                                                         929
                                                                                                                                                                                                                                                      989
                                                                                                                                                                                                                                                                                                                 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
G 870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         399;
```

```
GGGGGGAGGGCCTTTNAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGAGGTCAAGGG 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTANTGTGGGANGATNGGGGTTTNCGANGGCCCCGGGANTNNNNATGGACTTGGNAGGCT 76
GCACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATT-GATGGGGCGCACCGTG
                      | CACACACGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTTGATGGNGCGGCACCGTG
                                                                                                                                                                  CTGCAGCACGCGGGTCATGGTGGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTGAT
                                                                                                           TTGCAGCACGCGGGTCATGGTGGGGGCAGTAACCGGCACAGATGGTGGTGTTGACGGTGAT
                                                                                                                                                                                                               GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCCGGCAG-ACCCC
                                                                                                                                                                                                                                                         GAGAGCCACGGCGTAGGAGACCACGGGGTTCACGCCGCGCGGGCAGCCAGGGAGCCGGAT
                                                                                                                                                                                                                                                                                                  GTGGTCCTTGGGACCCCCGCAGTCAGTGGTGCTGCTGCGGCGGCAGAGTGCACATTGACAGCT
                                                                                                                                                                                                                                                                                                                                                                                         GTGGTCCTTGGGACCCC-GCAGTCAGTGGTGCTGCGGCGGCAGAGTGCACATTNACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          High quality sequence stops: 329 source: IMAGE Consortium, Liur free through Lini; contact the This clone is available royalty-free through Lini; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Wilson RK
WashU-Merck EST Project
WashIngton University School of Medicine
4444 Forest Park Parkway, Box 8501, St. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichthyes; Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Archonta; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 446)
1 (bases 1 to 446)
1 (bases 1, Clark, N., Dubuque, T., Elliston, K., Hawkins, M., Hillian, M., Kucaba, T., Le, M., Lennon, G., Marra, M., Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F., Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The WashU-Merck EST Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/clone="258890"
<1. .>446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .>446
108 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              371; DB 13;
No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               St. Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 446;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ٠.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    adapters
                                                                                                                                                                                                                                                         1050
                                                                                                                                                                                                                                                                                                                                              1110
871
                                        433
                                                                                  930
                                                                                                                            373
                                                                                                                                                                     990
                                                                                                                                                                                                                 313
                                                                                                                                                                                                                                                                                                  254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ECO
```

```
င့
                                                                                            ઠ
                                                                                                                                     မှ
                                                                                                                                                                                                                                 ဌ
                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
LOCUS
    밁
                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (EYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                          Query Match 28.2%;
Best Local Similarity 97.1%;
Matches 409; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                1169
                                                                                                                                            1229
                                                                                                                                                                                                                              1289 TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT 1230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                            136
    196
                                                                                                                                                                                          76
                                                                                                                                                                                                                                                                                 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13
                                                                                                                                                               GGCAGGAGGGCCTTTAAGGAAGAGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG 135
GAGAGCCACGGCGTAGGAGACCACGGGGGTTCACGCCGCGCGG-CAGCCAGGGAGCCGGAT 254
                                           GTGGTCCTTGGGACCCCCGCAGTCAGTGGTGCTGCTGCGGCGGCAGAGTGCACATTGACAGCT 1110
                                                                                         GTGGTCCTTGGGACCCCGACAGTCAGTGGTGCTGCCGGCGGCAGAGTGCACATTGACAGCT 195
                                                                                                                                       GGGGGGAGGGCCTTTGAGGAAGAGGAGTCCTGGAAGCGGGGGTCATCACAGGTCAAGGG
                                                                                                                                                                                                                                                                            TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGACTTGGAAGGCT 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA644163
g2569381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hillier, L., Allen, M., Bowles, L., Dubuque, T., Geisel, G., Jost Krizman, D., Kucaba, T., Lacy, M., Le, N., Lennon, G., Marra, M., Martin, J., Moore, B., Schellenberg, K., Steptoe, M., Tan, F., Theising, B., White, Y., Wylie, T., Waterston, R. and Wilson, R. WashU-NCI human EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This clone is available royalty-free through LINL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Seq primer: -40ml3 fwd. ET from Amersham High quality sequence stop: 335.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis,
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           af62d08.s1 Soares NhIMPu S1 Homo sapiens cDNA clone 1046607 3' similar to gb:J00117 CHORIOGONADOTROPIN BETA CHAIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryotae; Metazoa; Chordata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 526)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA644163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (HUMAN);
                                                                                                                                                                                                                                                                                                                                                                                                                                                 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /Organism="Homo sapiens"
//Organ: mixed (see below); Vector: pT773D-Pac
//note="Organ: mixed (see below); Vector: pT773D-Pac
//note="Organ: mixed (see below); Vector: pT773D-Pac
//pharmacia) with a modified polylinker; Site_1: Not I;
Site_2: Eco RI; Equal amounts of plasmid DNA from three
normalized libraries (melanocyte 2NbHM, pregnant uterus
NbHPU, and fetal heart NbHH19W) were mixed, and ss circles
were made in vitro. Pollowing HAP purification, this DNA
was used as tracer in a subtractive hybridization
reaction. The driver was PCR-amplified cDNAs from pools of
5,000 clones made from the same 3 libraries. The pools
consisted of I.M.A.G.E. clones 260232-265223,
340488-345479, and 484488-489479."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissue_type="Pooled
pregnant uterus"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taxon:9606"
/clone="1046607"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib="Soares NhHMPu S1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 526
                                                                                                                                                                                                                                                                                                                                                                                                                                               ი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 đđ
                                                                                                                                                                                                                                                                                                                          Score 367; DB 28; Pred. No. 0.00e+00; 0; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                               201 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human melanocyte, fetal heart,
                                                                                                                                                                                                                                                                                                                                                                                                                                               85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST
                                                                                                                                                                                                                                                                                                                                                                        Length 526;
                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63108
                                                                                                                                                                                                                                                                                                                             6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27-0CT-1997
                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Jost, S.,
                                                                                                                                     1170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                             9
```

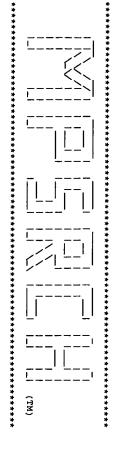
```
RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  မှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ç
                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  870 G 870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               431 G 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            314 -TGCAGCACGCGGGTCATGGTGGGGCAGTAGC-GGCACACATGGTGGTGGTGTTGACGGTGAT 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            929 G-CACACGGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGCCGCACCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCACACGGGCAGCCCTCCTTCTCCACAGCCAGGGTGGCATTGATGGGGGCGG-ACCGTG 430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGCAGCACGCGGGTCATGGTGGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCCGGCAGGACCCC 990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGC-GGCAGGACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hillier, L., Allen, M., Bowles, L., Dubuque, T., Geisel, G., Jost, S., Kucaba, T., Lacy, M., Le, N., Lennon, G., Marra, M., Martin, J., Moore, B., Schellenberg, K., Steptoe, M., Tan, F., Theising, B., White, Y., Wylie, T., Waterston, R. and Wilson, R. Washly-Merck, EST Project 1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g1855917
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     zr46c04.s1 Soares NhHMPu S1 Homo sapiens cDNA clone 666438 3 similar to gb:J00117 CHORIOGONADOTROPIN BETA CHAIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 834 Std Error: 0.00
Seq primer: -41ml3 fwd. ET from Amersham
High quality sequence stop: 361.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryotae;
Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tel: 314 286 1800 Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (HUMAN);.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 400)
                                                                                                                                /note="Organ: mixed (see below); Vector: pT773D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (melanocyte 2NbHM, pregnant uterus NbHPU, and fetal heart NbHH19W) were mixed, and so circles were made in vitro. Following Hap purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.E. clones 260232-265223, 340488-345479, and 484488-489479."
/tissue_type="Pooled human
pregnant uterus"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                  1. .400
                                                                                            /clone="666438"
                                                                  clone_lib="Soares NhHMPu S1"
                                                                                                                    /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mitochondrial eukaryotes; Metazoa; Chordata; Mammalia; Eutheria; Primates; Catarrhini; Ho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     St. Louis,
                                               melanocyte, fetal heart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          06-AUG-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            871
```

```
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     င္မ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Çþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE
                                                                                                                                                                                                                                                                                                                                                       DIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17 TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          77
                                                                                                                                                                                                                                                                                                                                                                                                                                               15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGACTCGAAGCGCACATCGCGGTAGTTGCACACCACCTGAGGCAGGGCGGTCAG-AGCCC 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTATTGTGGGAGGATCGGGGTGTCCGAGGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCT 1230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCACACGGGGCAGCCCTCCTTCTCCA 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGCAGCACGCGGGTCATGGTGGGGCAGTAGC-GGCACAGATGGTGGTGTTGACGGTGAT 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGAGCCACGGCGTAGGAGACCACGGGGGTTCACGCCGCGCGGGCAGCCAGGGAGCCGGAT 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCACACGGGCAGCCCTCCTTCTCCA 904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGCAGCACGCGGTCATGGTGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTGAT
                                                                                                                                                                                                     Homo sapiens
Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 419)
1 (bases 1 to 419)
Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M.,
Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M.,
Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F.,
Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                                                                                                                                        yw60b03.sl Soares placenta 8to9weeks 2NbHP8to9W Homo sapiens clone 256589 3' similar to gb:J00117 CHORIOGONADOTROPIN BETA
         Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. I Tel: 314 286 1800 Fax: 314 286 1810
                                                                                                                                        Contact: Wilson RK WashU-Merck EST Project
                                                                                                                                                                              The WashU-Merck EST Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                  PRECURSOR (HUMAN);.
H95374
                                                                                                                                                                                                                                                                                                                                                      1103007
primer: Promega -21m13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27.4%;
llarity 97.4%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement(<1. .>400)
/db_xref="GDB:5428470"
a 98 c 165 g
                                                                                                                                                                                                                                                                                                                                                                                                                                 419
                                                                                                                                                                                                                                                                                                                                                                                                                                ďď
                                                                                                                                                                                             Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 356; DB 25;
Pred. No. 0.00e+00;
0; Mismatches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                š
                                                                                                                                                                                                                                                                                                                                                                                                                                25-NOV-1996
                        information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                          BETA CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ņ
```

```
mRNA
BASE COUNT
ORIGIN
 ဌ
                         밁
                                              င္ပ
                                                                       밁
                                                                                             Сb
                                                                                                                       밁
                                                                                                                                            Çþ
                                                                                                                                                                       멍
                                                                                                                                                                                            çр
                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                           မှ
                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                            င္မွာ
                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                            Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                             1266
                                                                                                                                                1086
                                                                                                                                                                                               1146
                                                                                                                                                                                                                                             1206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                       181
                                                                        301
                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                      POCST
                                                                                                                                                                                                                                                                                                                    Н
                                                                                                                                                                                                                                           TNCTCCACAGCCAGGGTGGCTTTGATTGGGGCGCGCACCGTGGCCAAGC
                                                                                                            TAGTTGCACACCACCTGAGGCAGGGCCGCCAGGACNCCCCTGCAGCACGCGGGTTCATGG
                                                                                                                                                               CGGGGTTCACGCCGCGNGGCCAGCCAGGGAGCCGGATGGACTCGAAGCGCACATCGCGGT
                                                                                                                                                                                                             CAGTGGTGCTGCGGCGGCNGAGTGCACATTGACAGCTGAGAGCCACGGCGTAGGAGACCA
                                                                                                                                                                                                                                                                                           CGGAGGCCCCGGGAGTCGGGATGGGCTTGGAAGGCTGGGGGGAGGGCCTTTGAGGAAG
T-CTCCACAGCCAGGGTGGCATTGAT-GGGGCGGCACCGTGGACCAGC
                                                             TGGGGCAGTAGCGGNCACAGATGGTGGTGTTGANGGTGATGCACACGGGGCAGCCCTCCT
                                                                                                                                                                                              CAGTGGTGCTGCGGCGGCAGAGTGCACATTGACAGCTGAGAGCCACGGCGTAGGAGACCA
                                                                                                                                                                                                                                                                                                                   CGGGGTTCACGCCGCGCGGGCAGCCAGGGAGCCGGATGGACTCGAAGCGCACATCGCGGT
                                                 TGGGGCAGTAGCCGGCACAGATGGTGGTGTTGACGGTGATGCACACGGGGCAGCCCTCCT
                                                                                               -AGTTGCACACCACCTGAGGCAGGGCCGGCAGGAC-CCCCTGCAGCACGCGGGT-CATGG
                                                                                                                                                                                                                                                                                                                                          Similarity
390; Conser
                                                                                                                                                                                                                                                                                                                                                                                                       73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="Soares placenta 8to9weeks 2NbHP8to9w"
/dev_stage="two placentae: one from 8 weeks and ar
from 9 weeks post conception"
/lab_host="DH108 (ampicillin resistant)"
complement(<1...>419)
109 c 168 g 63 t 6 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                     27.0%;
95.6%;
                                                                                                                                                                                                                                                                                                                                        Score 351; DB 16;
Pred. No. 0.00e+00;
0; Mismatches 13
                                                                                                                                                                                                                                                                                                                                                                 Length 419
                                                                                                                                                                                                                                                                                                                                          Indels
                         408
 864
                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                     another
                                                                                                                                                                                               1087
                                                                                                                                               1027
                                                                                                                                                                                                                                            1147
                                                                       360
                                                                                                                       300
                                                                                                                                                                                                                                                                                                                    6
                                                 910
                                                                                                970
```

Search completed: Wed May 6 15:04:47 1998 Job time: 1203 secs.

4)



Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm

Tabular output not generated Run on: Wed May 6 09:06:59 1998; MasPar time 10.23 Seconds 491.010 Million cell upda updates/sec

Description: Perfect Scor

Sequence: Score: >US-08-804-166-8 (1-336) from US08804166.pep 2541 1 SRTSLLLAFGLLCLPWLQEG..... SRTSLLLAFGLLCLPWLQEG.....PSLPSPSRLPGPSDTPILPQ 336

Scoring table: Gap PAM 150

Searched: 120837 seqs, 14945562 residues

Post-processing: : Minimum Listing first 0% 45 summaries

Database

a-geneseq31
1:part1 2:part2 3:part3 4:part4 5:part5 6:part5 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26

Statistics: Mean 32.744; Variance 136.204; scale 0.240

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

110 9 8 8 7 6 6 5 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 N H	Result
1322 1322 1322 1322 1322 1322 1322 1322	2541	Score
552222222222222222222222222222222222222	100.0	Query Match I
1155455544551122645554455514455512265555455554	336 2	Length DB
8 R70109 8 R70107 4 R75080 4 R75084 4 R20787 8 R42059 8 R42059 2 R11082 2 R11082 2 R11083 3 R70108 3 R70108 3 R70108 4 R70108	6 W33360	BID
		D
TIMP (AUT 190)/ING-G-ALPHA TUMOUX NECTOSIS FACTO TINF-ALPHA 55KD RECEPT FINF-ALPHA 51KD RECEPT FINF-ALPHA 51KD AUTOF TINF-ALPHA 51KD AUTOF LAMBDÍA GERÍVEZ PR 30KD TIMF 161KD TOF 161KD AUTOF HUMAN 55KD TINF-BINDÍA TINF-R-GBPH fusion pro TINF-R-GBPH fusion pro HUMAN TUMOUX NECTOSIS TINF-R-EBH 175 fusion TINF-R-EBH 175 fusion TINF-R-EBH 175 fusion TINF-R-EBH 175 tumoux nec Mutant p55 tumoux nec	TBP(20-190), TBP(20-161),	Description
Necrosis Facto BP 130 fusion ha 55kD recept 'R. ha binding pro derived TNF-R. F inhibitor pr 5kD TNF-bindin BPH fusion pro BBH fusion pro		9
	;	77
4 6 9 6 120 5 9 3 6 120 4 6 9 6 120 5 9 6 120 9 5 0 6	2.22e-245 7.11e-192	Pred. No
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	, NO 01 1	•

δÃ 밁

61 tdcrecesgsftasenhlrhclscskcrkemgqveissctvdrdtvcgcrknqyrhywse 120

B

Matches Query Match Best Local 9

ch 100.0%; 1 Similarity 100.0%; 336; Conservative

Score 2541; DB 26; Pred. No. 2.22e-245; 0; Mismatches 0;

Length 336; Indels

0

Gaps

0

20 1313 51.7 455 8 R42197 p55 Tumour necrosis f 3.89e-119 21 1313 51.7 455 8 R51034 Mutant p55 tumour nec 3.89e-119 21 1308 51.5 455 8 R51034 Type I TNF receptor. 1.26e-118 21 1291 50.8 256 26 W33357 TBP(20-161)/hCG-alpha 6.87e-117 24 1263 49.7 161 5 R27496 TNF-R-GBP 130 fusion 4.96e-114 25 1263 49.7 181 5 R70109 TNF-R-GBP 130 fusion 4.96e-114 25 1263 49.3 199 4 R24009 TNF-R-GBP 130 fusion 4.96e-114 25 125 40.3 145 6 R30999 Human chorionic gonad 2.60e-90 1022 40.2 145 3 R15174 hCG methionine substi 2.13e-89 1022 40.2 145 3 R15170 hCG/hLH chimera, A5. 213e-89 1021 40.2 145 3 R15120 Single chain gonadotr. 2.13e-89 1021 40.2 265 15 R86259 Partially deglycosyla 2.13e-89 33 1021 40.2 145 3 R15117 hCG methionine substi 2.13e-89 31 1021 40.1 145 3 R15117 hCG/hLH chimera, A3. 2.69e-89 1022 40.1 145 3 R15117 hCG/hLH chimera, A3. 2.69e-89 1022 40.1 145 3 R15117 hCG methionine substi 2.39e-89 1015 40.1 145 3 R15117 hCG/hLH chimera, A3. 2.69e-89 1016 40.0 181 15 R86258 Human chorionic gonadotroph 1.38e-88 1016 40.0 181 15 R86258 Human CG beta-subunit 6.86e-89 1015 39.9 145 24 W27688 hCG/hLH chimera, B.67e-89 145 24 W2768																					٠.		٠.			
51.7 455 8 R42197 p55 Tumour necrosis f 3.89e-11 51.7 455 8 R51034 Mutant p55 tumour nec 3.89e-11 51.7 455 8 R51034 Mutant p55 tumour nec 3.89e-11 51.7 455 8 R51034 Mutant p55 tumour nec 3.89e-11 51.7 455 8 R12550 TBP(20-161)/hCG-alpha 6.87e-11 49.7 161 5 R27496 TMF-R-GBP 130 fusion 4.96e-11 49.7 844 13 R70109 TMF-R-GBP 130 fusion 4.96e-11 49.3 145 6 R30999 Human chorionic gonad 2.60e-90 40.2 145 3 R15174 hCG methionine substit 1.169e-89 40.2 145 3 R15174 hCG methionine substit 2.13e-89 40.2 145 3 R15120 hCG/hLH chimera, A5. 2.13e-89 40.2 265 15 R86247 hCG/hLH chimera, A5. 2.13e-89 40.2 265 15 R86247 partially deglycosyla 2.13e-89 40.1 145 3 R15170 hCG/hLH chimera, A3. 2.69e-89 40.1 145 3 R15170 hCG/hLH chimera, A3. 2.69e-89 40.1 145 3 R15173 hCG histidine substit 2.39e-89 40.1 145 3 R15173 hCG histidine substit 4.30e-89 145 24 W27681 hCG/hLH chimera, A3. 2.69e-89 145 3 R15173 hCG histidine substit 6.86e-89 145 24 W27681 hCG/hLH chimera, D7. 1.38e-88 1509 145 24 W27682 Chorionic gonadotroph 1.38e-88 39.9 145 24 W27682 Chorionic gonadotroph 1.38e-88 138e-88 138e-	5	4	ü	2	Ξ	ö	9	8	37	õ	ŭ	4	ũ	ະ	<u>~</u>	ŏ	9	8	?7	8	ŭ	4	ü	ຮ	ï	õ
7 455 8 R42197 p55 Tumour necrosis f 3.89e-11 7 455 8 R51034 Mytant p55 tumour nec 3.89e-11 7 455 8 R2503	1013	1013	1013	1013	1014	1015	1015	1016	1018	1020	1020	1020	1021	1021	1021	1021	1022	1025	1030	1252	1263	1263	1291	1308	1313	1313
8 R42197 p55 Tumour necrosis f 3.89e-11 8 R51034 Mutant p55 tumour nec 3.89e-11 26 W33357 TBP(20-161)/hCg-alpha 6.87e-11 5 R27496 Native 30 kD TNF inhi 4.96e-11 7 R24080 TNF-R-GBP 130 fusion 4.96e-11 7 R24080 Human chorionic gonad 2.60e-90 6 R30999 Human chorionic gonad 8.37e-90 7 R15174 hCG methionine substit 2.13e-85 7 R15120 hCG/hLH chimera, A5. 2.13e-85 7 R15120 FR86247 Partially deglycosyla 2.13e-85 7 R86247 Partially deglycosyla 2.13e-85 7 R86259 Human chorionic gonad 2.69e-85 7 R15117 hCG/hLH chimera, A3a. 2.69e-85 7 R15117 hCG methionine substit 4.30e-85 7 R15173 hCG histidine substit 4.30e-85 7 R15174 hCG methionine substit 4.30e-85 7 R15175 hCG histidine substit 4.30e-85 7 R15177 hCG histidine substit 4.30e-85 7 R15179 hCG histidine substit 4.30e-85 7 R15170 hCG methionic gonadotroph 1.38e-88 7 R15170 hCG methionine substit 1.38e-88	9	9	٥	ø	9	ø	9		•	•	•	•	•	•					•	9	9	9	0	Ľ	۲	
R42197 p55 Tumour necrosis f 3.89e-11 R1250 Type I TNF receptor. 1.26e-11 R12550 TBP(20-161)/hCG-alpha 6.87e-11 R27496 Native 30 kD TNF inhi 4.96e-11 R70109 Truncated TNF-alpha 5.65e-11 R15043 Human chorionic gonad 2.60e-90 R15174 hCG methionine substi 2.13e-89 R15175 hCG/hLH chimera, A5. 2.13e-89 R15170 hCG/hLH chimera, A5. 2.13e-89 R15171 hCG/hLH chimera, A5. 2.13e-89 R15172 hCG/hLH chimera, A5. 2.13e-89 R15173 hCG methionine substi 2.13e-89 R15174 hCG methionine substi 2.13e-89 R15175 hCG/hLH chimera, A5. 2.69e-89 R15176 hCG methionine substi 2.69e-89 R15177 hCG methionine substi 2.69e-89 R15178 hCG methionine substi 4.30e-89 R15179 hCG methionine substi 4.30e-89 R15170 hCG histidine substi 4.30e-89 R15171 hCG histidine substi 4.30e-89 R15103 hCG histidine substi 8.67e-89 R15103 hCG histidine substi 8.67e-89 R15103 hCG methionine substi 1.38e-88 R15107 hCG methionine substi 1.38e-88 R15108 hCG/bLH chimera, D7. 1.38e-88																										
Tumour necrosis f 3.89e-11 Int p55 tumour nec 1.26e-11 20-161)/hCG-alpha 6.87e-11 ve 30 kD TNF 1nhi 4.96e-11 ve 30 kD TNF 1nhi 4.96e-11 cated TNF-alpha 5 6.57e-11 n chorionic gonad 2.60e-90 n chorionic gonad 1.69e-81 histidine substi 2.13e-89 histidine substi 2.69e-89 histidine substi 2.69e-89 histidine substi 4.30e-89 histidine substi 4.30e-89 histidine substi 5.86e-89 histidine substi 1.88e-88 bish conic gonadotroph 1.38e-88 bish chimera, D7. histidine substi 1.38e-88 bish chimera, D7. 1.38e-88	W2768	W2768						쫎	R1517	R1516						R1517	R1517	R3099			R7010	R2749	W3335			R42
.89e-11 289e-11 87e-11 96e-11 96e-11 96e-11 96e-11 100e-89 13e-89 13e-89 13e-89 13e-89 13e-89 13e-89 13e-89 13e-89 13e-89			hCG methionine substi	င္			Chorionic gonadotroph	beta-subu	histidine subs	methionine		ionic	lly deglycosyl	chain gonadot	hLH chimera, A5	methionine	histidine s	chorionic	rionic	TNF-alpha	R-GBP 130	ve 30 kc	20-161)/	I TNF	utant p55 tumour	55 Tumour necrosis
	.38e-8	.38e-8	.38e-8	.38e-8	.09e-8	.67e-8	.67e-8	.86e-8	.30e-8	.69e-8	.69e-8	.69e-8	.13e-8	.13e-8	.13e-8	.13e-	.69e-	.37e	.60e-	.57e-11	.96e-11	.96e-11	.87e-11	.26e-11	.89e-11	.89e-11

# ALIGNMENTS

```
SOURCE CONTROL PRODUCT OF THE SOURCE
Hybrid dimeric protein comprising two co-expressed units - each probased on receptor or ligand and a subunit of a heterodimeric protein compressed inducing follicular maturation example; Pages 39-40; 60pp; English.

Example: Pages 39-40; 60pp; English.

A novel fusion protein comprises 2 dimer forming co-expressed amino cacid sequences, each consisting of a homodimeric or heterodimeric receptor chain or ligand, with ligand-receptor binding activity, bound directly or via a peptide linker to a subunit of a heterodimeric protein hormone capable of forming a heterodimer with the hormone's other subunits. The fusion protein, e.g. the thrombopoietin (TPD)/human chorionic gonadotrophin-beta subunit (hCG-beta) fusion protein denoted by the present sequence, significantly increases the biological activity of the hormone of injections needed.

Sequence 336 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              W33360 standard; Protein; 336 AA.
W33360;
19-MAR-1998 (first entry)
TBP(20-190)/hCG-beta fusion protein.
TBP(20-190)/hCG-beta fusion protein; TPO; human chorionic gonadotrophin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (ISTF ) ARS APPLIED RES SYSTEMS HOLDING Campbell RK, Chappel SC, Jameson BA; WPI; 97-425036/39.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
W09730161-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        beta subunit; hCG-beta.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-FEB-1997; U02315.
20-FEB-1996; US-011936.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
```

```
TRESULT PROPERTY OF THE SULT P
                                                                                                              Ş
                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ρy
                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DR N-BSDS; 794008.

N-BSDS; 794008.

PH Hybrid dimeric protein comprising two co-expressed units - each per Hybrid dimeric protein comprising two co-expressed units - each per based on receptor or ligand and a subunit of a heterodimeric for hormone, especially FSH, for inducing follicular maturation per Example; Pages 34-35; 60pp; English.

A novel fusion protein comprises 2 dimer forming co-expressed amino cacid sequences, each consisting of a homodimeric or heterodimeric cacid sequences, each consisting of a homodimeric or heterodimeric count of the consisting of a homodimeric or heterodimeric protein hormone capable of forming a heterodimer with the hormone's other subunits. The fusion protein, e.g. the theorem's other subunits. The fusion protein, e.g. the thormone's other subunits. The fusion protein, e.g. the chrombopoietin (TPO)/human chorionic gonadotrophin-beta subunit (hGG-beta) fusion protein denoted by the present sequence, component, reducing the requirement for hormone itself and the component, reducing the requirement for hormone itself and the Sequence. 307 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-AUG-1997.

20-FEB-1997; U02315.

20-FEB-1996; US-011936.

(ISTF ) ARS APPLIED RES SI

Campbell RK, Chappel SC, Campbel RK, Chappel RK, 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TBP(20-161)/hCG-beta fusion protein. Fusion protein; thrombopoietin; TPO; beta subunit; hCG-beta.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      W33358 standard;
W33358;
19-MAR-1998 (fi)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9730161-A1.
                                                   165
                                                                                                                  121
                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19
                                                                                                                                                                                                                                                                                                                                                                                                          _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            L
                                                                                                                                                                                                                                                                                                                                                                                       cddprfqdsssskapppslpspsrlpgpsdtpilpq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NLFQCFNCSLCLNGTVHLSCQEKQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nlfqcfncslclngtvhlscqekqntvctchagfflrenecvscsnckkslectklclpq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDDPRFQDSSSSKAPPPSLPSPSRLPGPSDTPILPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PALPQVVCNYRDVRFESIRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              palpqvvcnyrdvrfesirlpgcprgvnpvvsyavalscqcalcrrsttdcggpkdhplt 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 Similarity
307; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              79.6%;
larity 91.4%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
279..1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein;
| agagprcrpinatlavekegcpvcitvntticagycptmtrvlqgvl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SYSTEMS HOLDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jameson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2022; DB 26;
No. 7.11e-192;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human chorionic gonadotrophin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                307;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                164
                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ۲
```

```
RESUL
ID
AC
DT
DE
XW
XW
                                                                                                                                          Ş
                                                                                                                                                                     밁
                                                                                                                                                                                              á
                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ą
                                                                                                                                                                                                                                                                                                                                                                                                                                      Hybrid dimeric protein comprising two co-expressed units - each probased on receptor or ligand and a subunit of a heterodimeric hormone, especially FSH, for inducing follicular maturation Example; Pages 37-38; 60pp; English.

C. A novel fusion protein comprises 2 dimer forming co-expressed amino acid sequences, each consisting of a homodimeric or heterodimeric creceptor chain or ligand, with ligand-receptor binding activity, bound directly or via a peptide linker to a subunit of a heterodimeric protein hormone capable of forming a heterodimer with the hormone's other subunits. The fusion protein, e.g. the thrombopoletin (TPO)/human chorionic gonadotrophin-alpha subunit (hCG-alpha) fusion protein denoted by the present sequence, significantly increases the biological activity of the hormone
                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ISTF ) ARS APPLIED RES SY Campbell RK, Chappel SC, J WPI; 97-425036/39.
N-PSDB; T94021.
Hybrid dimeric protein com
29-JAN-1991 (first entry)
Tumour Necrosis Factor Binding Protein from pTNF-BP15 cDNA.
Tumour necrosis factor binding protein; TNF-BP; TNF-receptc
pTNF-BP15; infectious disease; parasitic disease; cachexia;
autoimmune disease; shock.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W33359 stand
W33359;
19-MAR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fusion protein; thrombope alpha subunit; hCG-alpha
                                                                        R07449 standard;
R07449;
                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                               number of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-AUG-1997.
20-FEB-1997; U02315.
20-FEB-1996; US-0119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9730161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TBP(20-190)/hCG-alpha fusion profusion protein; thrombopoietin;
                                                                                                                                          181
                                                                                                                                                                     181
                                                                                                                                                                                                121
                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                       _
                                                                                                                                                                                                                                                                                                                                  ш
                                                                                                                                                        ienvkgtedsgttagaapgc
                                                                                                                                                                                                              nlfqcfnctlclngtvhlscqekqntvctchagfflrenecvscsnckkslectklslpq
                                                                                                                                                                                                                                               tdcrecesgsftasenhlrhclscskcrkemgqveissctvdrdtvcgcrknqyrhywse 120
                                                                                                                                                                                                                                                                                                     cddprfqdsssskapppslpspsrlpgpsdtpilpq 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PALPQVVCNYRDVRFESIRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLT
                                                                                                                                          IENVKGTEDSGTTAGAGPRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDDPRFQDSSSSKAPPPSLPSPSRLPGPSDTPILPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               palpqvvcnyrdvrfesirlpgcprgvnpvvsyavalscqcalcrrsttdcggpkdhplt
                                                                                                                                                                                              NLFQCFNCSLCLNGTVHLSCQEKQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IENVKGTEDSGTTAGAGPRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard;
                                                                                                                                                                                                                                                                                                                                                              196;
                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                 injections needed.
285 AA;
                                                                                                                                                                                                                                                                                                                                                           59.2%;
larity 98.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        us-011936.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first
                                                                                     protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SYSTEMS HOLDING, Jameson BA;
                                                                                     371
                                                                                                                                                                     200
                                                                                                                                          200
                                                                                                                                                                                                                                                                                                                                                           Score 1505; DB 26;
Pred. No. 8.93e-139;
2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein.
in; TPO;
                                                                                     ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       chorionic
                                TNF-receptor;
                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gonadotrophin;
                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                180
                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                             0
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EP-393438-A.
24-OCT-1990.
06-APR-1990: 106624.
21-APR-1989: DE-913101.
21-JUN-1989: DE-920282.
                                                                                                                                                                                                                                                                                  WO9506737-A.
09-MAR-1995.
01-SEP-1994; G01900.
03-SEP-1993; GB-018350.
23-AUG-1994; GB-017021.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA encoding TNF binding protein and TNF- receptor - used in tumour treatment and to understand mechanismsm to TNF action Disclosure; Fig 1(1-3); Sipp; German.

Clone pTNF-BP15 was used to contruct pADTNF-BP, for transfection of e.g. COS7 cells. The expressed proteins are useful prophylactically and therapeutically to control disorders which involve the damaging effects of TNF-alpha or -beta (e.g. infectious parasitic diseases, shock, cachexia, autoimmune diseases, adult respiratory distress syndrome etc., or side effects of treatment wit TNG-alpha). They can also be used as diagnostic reagents for assaying TNF and in study of TNF-receptor interactions.

See also Q06282-Q06285.
                          a receptor peptide.

Example A; Page 53-54; 93pp; English.

Hybrid peptides for binding cytokines, comprising a malaria parasite (Plasmodium falciparum) peptide (capable of binding to a red blood cell (RBC)) and a receptor peptide are claimed. R70103-25 are examples of these hybrid peptides. R70107 is a fusion of tumour necrosis factor receptor (in accordance with H Loetscher et al Cell, Vol. 61, 351-359) and glycophorin binding protein (GBP) 130. The use of cytokine receptors not normally found on RBCs means that the cytokine can bind harmlessly to the RBC without deleterious effect. The RBC protects the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R70107
R70107;
                                                                                                                                                                                              New hybrid peptide(s) for binding cytokine(s) - comprising a malaria parasite peptide capable of binding a red blood cell
                                                                                                                                                                                                                                 Prendergast KF;
WPI; 95-115452/15.
                                                                                                                                                                                                                                                                                                                                                                   Chimeric Homo sapiens. Chimeric Plasmodium fa
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TNF-R-GBP 130 fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB; Q06282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hauptmann R, Himmle WPI; 90-321987/43.
                                                                                                                                                                                                                                                                    (PREN/) PRENDERGAST K F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (BOEH ) BOEHRINGER INGELHEIMINT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161 kqntvctchagfflrenecvscsnckkslectklclpq1envkgtedsgtt 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KONTYCTCHAGFFLRENECYSCSNCKKSLECTKLCLPQIENVKGTEDSGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     52.0%;
il Similarity 100.0%;
171; Conserveti
                                                                                                                                                                                                                                                                                                                                                                                                   peptide; malaria parasite; Plasmodium falciparum; fusion pro
ood cell; cytokine receptor; glycophorin binding peptide 130;
0; GBPH; glycophorin binding peptide homologue; glycophorin A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R, Himmler A, Maurer-Fogy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              371 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                  falciparum
excretion from the kidney, and due to steric he cytokines binding to a receptor in another
                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        e 1322; DB 2;
No. 4.69e-120;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               I, Stratowa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 371;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                    protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
RESULT NAME OF THE STATE OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                និនិនិនិនិនិនិនិ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 17
              treating autoimmune disease, septic shock, HIV etc.

Example, Fig 1; 43pp; English.

This sequence was deduced from human TNF-alpha cDNA isolated as in Q24440. The first 35 amino acids are generally quite hydrophobic and probably represent a signal sequence. Residues 35-40 are highly charged (DREKR) and this is not normally found in secretory signal sequences. It is possible the receptor is processed by proteolysis after residue 40 which contains a dibasic cleavage site (KR). Hydropathy analysis of this sequence predicts a single transmembrane domain of 23 amino acids, dividing the sequence into an extracellular domain of 171 residues and a cytoplasmic domain of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9207076-A.
30-APR-1992.
18-OCT-1991;
18-OCT-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GBP 130 or GBPH (GBP homologue) are the prefd. malaria parasite peptidused, others include EBA 175 (175 kDa erythrocyte binding antigen), PMMSA (pre major merozoite surface antigen) and the Duffy binding receptor molecule (eg. exhibited by Plasmodium vivax). These peptides bind to pref. glycophorin A, B and C, sialo glycoproteins, found on the surface of RBCs. The hybrid peptides are thus used to lower the levels of free cytokines in the circulation to reduce pathological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tumour necrosis factor alpha; extracellular binding domain; treatment; pulmonary diseases; septic shock; HIV infection; malaria; viral meningits; graft versus host disease;
                                                                                                                                                                                                                                                                                                                                                                                                   Brennan FM, Feldmann WPI; 92-167156/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TNF-alpha 55kD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R24000;
05-NOV-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                 New polypeptide capable of binding human TNF alpha - comprises first three cysteine-rich subdomains of TNF alpha receptor for
                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; Q24440
                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-OCT-1990; GB-022648.
(CHAR-) CHARING CROSS S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          autoimmune disease; rheumatoid arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R24000 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               damage.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KONTYCTCHAGFFLRENECYSCSNCKKSLECTKLCLPQIENYKGTEDSGTTA 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       kqntvctchagfflrenecvscsnckkslectklclpqienvkgtedsgtna
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslc1ngtvh1scqe 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          dsvcpqgkyihpqnnsicctkchkgtylyndcpgppgqdtdcrecesgsftasenhlrhcl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 Similarity
171; Conse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                451 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                G01826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note= "potential"
151..153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        145..147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /label- N linked glycosylation site
/note- "potential"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note- "potential"
[15] 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Protein; 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'label- signal peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               52.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                            ĭ
                                                                                                                                                                                                                                                                                                                                                                                                                            SUNLEY
M, Gray
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               transmembrane domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score
Pred.
0; M
                                                                                                                                                                                                                                                                                                                                                                                                                            PW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   re 1321; DB 13;
d. No. 5.93e-120;
Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                            CENT.
Turner MJC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                parasite peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 191
                                                                                                                                                                                   are highly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AIDS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     we shall be surface proteins, suggesting the TNF-alpha receptor is structurally related to a family of receptors.

NOTE:- Residues 371,2 given in the sequence as T,L, are encoded by TGG (W) and AAG (K).

See also 224440-51, R24000, R24080-84, R27585, Q29236-8
This sequence represents human p55 tumour necrosis factor (TNF-R). Expression of this receptor is regulated by shedding of the extracellular receptor fragment. The p55 TNF-R can be shed in response to different inducing agents, e.g. phorbol myristate acetate (PMA), depending on cell type. The only region of the receptor whose structure affects the shedding response is the spacer region (see R75012) in the extracellular
                                                                                  (TNF) receptor - from cell-bound TNF- r antagonising deleterious effects of TNF. Disclosure; Fig 1; 40pp; English.
                                                                                                                                                              11-OCT-1994; 075742.
12-OCT-1993; IL-107268.
(YEDA ) YEDA RES & DEV CO
Batkin M, Brakebusch C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    epidermal growth factor recepto phorbol myristate acetate; PMA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R75084 standard;
R75084;
                                                                                                         New protease capable of cleaving soluble tumour necrosis factor (TNF) receptor - from cell-bound TNF- receptor, useful for
                                                                                                                                       N-PSDB; Q90513
                                                                                                                                                                                                                  04-MAY-1995.
                                                                                                                                                                                                                                                           region
                                                                                                                                                                                                                                                                                  misc_difference
                                                                                                                                                                                                                                                                                                               misc_difference
                                                                                                                                                                                                                                                                                                                                      misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                    modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                             modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tumour necrosis factor receptor; TNI ermal growth factor receptor; EGF-R;
                                                                                                                                                  95-194342/26.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 kqntvctchagfflrenecvscsnckkslectklclpq1envkgtedsgtt 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         dsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhc1 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KONTYCTCHAGFFLRENECYSCSNCKKSLECTKLCLPQIENYKGTEDSGTT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ch 52.0%;
1 Similarity 100.0%;
171; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                     /note=
                                                                                                                                                                                                                                                                                                            /note= "major C terminus 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "N terminus of 54..56
                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "glycosylation 161..163
                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "glycosylation 145..147
                                                                                                                                                                                                                                            /note-
                                                                                                                                                                                                                                                        /note= "minor C
212..234
                                                                                                                                                                                                                                                                                             /note= "essential for shedding reaction"
                                                                                                                                                                                                                                                                                                                                                                             /note-
                                                                                                                                                                                                                                                                                                                                                                                                       'note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Protein;
                                                                                                                                                                                                                                                                                                                                                                                         e- "glycosylation
                                                                                                                                                                                                                                            "transmembrane region"
                                                                                                                                                                                                                                                                                                                                                   "spacer region"
                                                                                                                                                                                                                                                                                                                                                                             "peptide used
                                                                                                                                                             LTD.
Varfolomeev
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1322; DB 4;
Pred. No. 4.69e-120;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₹
                                                                                                                                                                                                                                                                      terminus
                                                                                                                                                                                                                                                                                                                                                                           'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TNF-R; human; murine; c
-R; protease; inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                       site"
                                                                                                                                                                                                                                                                                                                                                                                                                               site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                         site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   soluble
                                                                                                                                                              Œ
                                                                                                                                                                                                                                                                                                                                                                             creation
                                                                                                                                                                                                                                                                     for
                                                                                                                                                                                                                                                                                                                         for soluble
                                                                                                                                                               Wallach
                                                                                                                                                                                                                                                                      soluble
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 455
                                                                                                                                                                                                                                                                                                                                                                             of chimeras"
                                                                                                                                                              U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TNF-R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                      p55
                                                                                                                                                                                                                                                                      TNF-R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             chimera;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      88888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cc domain. This region is located close to a site of cleavage of the cmolecule, and links the Cys rich module to the transmembrane domain. The spacer region of the encoded protein was used to create the chimeras between human p55 TNF-R and murine epidermal growth factor receptor (EGF-R) that are represented by R75007-11. This spacer region was subjected to deletion mutations (R75013-25) and substitutions (R75016-47). Of the spacer region, the most important residues are can find the second of the spacer region, with val 173 being the most important of these. The shedding of the receptor is independent of the comportant of these. The shedding of the receptor is independent of the side chain identity of these residues, with the exception of a limited dependence on the identity of Val 173. Mutations which alter the conformation of the protein adversely effect the shedding process. The mutations shown in R75013-47 were introduced in order to create an inhibitor of a protease that is capable of cleaving the soluble TNF-R from the cell bound TNF-R. Fragments of these inhibitors can be seen in CC R75017-9, R75033-5 and R75042-3. These protease inhibitors can be used for enhancing TNF function.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                  05-FEB-1992.
05-FEB-1992.
15-JUN-1990; GB-013410.
15-JUN-1990; GB-013410.
(CHAR-) CHARING CROSS SUNLE
Feldman M, Gray P, Turner M
WPI; 92-043613/06.
N-PSDB; Q20973.
e.g. rheumatoid arthritis

e.g. rheumatoid arthritis

Disclosure; Fig 1; 25pp; English.

The amino acid sequence is that of tumour necrosis factor alpha

binding protein which contains the extracellular domain of human

binding protein which contains the extracellular domain of human

alpha receptor. It is soluble and can be used in the regulation

alpha receptor. The soluble and sequestering the cytokine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R20787
                                                                                                                                                                                                                                                                                        GB2246569-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               xey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tumour necrosis extracellular d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TNF-alpha binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R20787;
11-MAY-1992
                                                                                                                                                                                                                                                                                                                       modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101
                                                                                                                                   ew tumour necrosis factor alpha binding protein and polypeptide
useful in treating cachexia, sepsis and auto immune diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KONTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     kqntvctchagfflrenecvscsnckkslectklclpqienvkgtedsgtt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    scskcrkemgqveissctvdrdtvcgcrkngyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   dsvcpqgky1hpqnns1cctkchkgty1yndcpgppqdtdcrecesgsftasenh1rhcl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             52.0%;
l Similarity 100.0%;
171; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      455 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              domain.
                                                                                                                                                                                                                                                                                                                                                                                          /note= "e
212..234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ng protein.
factor alpha:
                                                                                                                                                                                                                                                                                                                       /note= "|
151..153
                                                                                                                                                                                                                                                                                                                                                          /note=
145..1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                       /note=
                                                                                                                                                                                                                                                                                                                                                                                                                             30..199
                                                                                                                                                                                                                                                                                                                                                                                                                                                            41..455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "signal
                                                                                                                                                                                                                                                                                                                                                                                                                                           /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein;
                                                                                                                                                                                                                                                                                                                                                            . . 147
                                                                                                                                                                                                    SUNLE.
                                                                                                                                                                                                                                                                                                                                                                                                         "extracellular domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                         "mature peptide'
                                                                                                                                                                                                                                                                                                    "potential N-glycosylation
                                                                                                                                                                                                                                                                                                                                       "potential N-glycosylation
                                                                                                                                                                                                                                                                                                                                                                          "transmembrane domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1322; DB 14;
Pred. No. 4.69e-120;
0; Mismatches 0;
                                                                                                                                                                                                     Brennan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              autoimmune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          peptide"
                                                                                                                                                                                                     'n
                        Lraceliular domain of human
be used in the regulation o
sequestering the cytokine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              diseases;
                                                                                                                                                                                                                                                                                                      site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                         site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cachectin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The
```

```
RESULTANCE CONTRIBUTION OF THE PROPERTY OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ន្តន្តន្ត
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                         The linker may comprise 5-100 amino acids selected from Gly, Asp, Ser, Thr and Ala. These linkers separate the individual moeities by such a distance that each component of the fusion protien is capable of folding into the secondary or tertiary structure required for its biological activity. These fusion proteins may be used in therapy, diagnosis and assays for conditions mediated by TNF or II-1, particularly in conditions in which both TNF and II-1 play a causitive role. They may be used to treat cachexia, rheumatoid arthritis, diabetes, multiple sclerosis, pulmonary fibrosis and silicosis, cerebral malaria, allograft and xenograft rejection in graft verses best discosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New fusion protein tumour necrosis factor and human interleukin-1 receptor - useful in therapy, diagnosis and assays of e.g. rheumatoid arthritis, diabetes, cerebral malaria, sepsis, etc. pisclosure; Page 57-59; 85pp; English.

The sequences given in R42058-59 repressent human tumour necrosis factor receptor (TNF-R) and the sequences in R42060-61 represent human interleukin-1 receptor (IL-IR). These sequences were used the production of a fusion protein which conformed to one of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R42059
R42059;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; tumour necrosis factor receptor; TNF-R; interleukin-1 receptor; IL-1R; fusion protein; linker; TNF; IL-1; cachexia; cerebral malaria; rheumatoid arthritis; diabetes; multiple sclerosis; septic shock; pulmonary fibrosis; silicosis; allograft; xenograft; rejection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cachexia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-OCT-1993.
26-MAR-1993; U02938.
30-MAR-1992; US-860710.
(IMMV) IMMUNEX CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
  host disease, sepsis, se autoimmune dysfunctions. Sequence 455 AA;
                                                                                                                                                                                                                                                                                                                                                                                                 TNF-R-linker-TNF-R-linker-IL-1R
IL-1R-linker-TNF-R-linker-TNF-R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein
                                                                                                                                                                                                                                                                                                                                                                             TNF-R-linker-TNF-R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 93-336592/42.
N-PSDB; Q49932.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Smith CA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                autoimmune dysfunction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          graft verses host disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lambda derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lambda-gt10-7ctnfbp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41 dsvcpqgky1hpqnns1cctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhc1 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   therefore be used therapeutically to treat disorders such hexia, sepsis and autoimmune diseases, specifically rheumat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SCSKCRKEMGQVE1SSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCS1ClNgTVhLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     52.0%;
1 Similarity 100.0%;
171; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TNF-R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note= "Signal peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Protein;
                                                          septic shock,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Mature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sepsis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 1322; DB 4;
Pred. No. 4.69e-120;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              htne-r"
                                                                                                                                                                                                                                                                                                                                                                                                       ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       inflammation; allergy;
                                                          inflammation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rheumatoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
RESULT
ID R:
AC R.
DT 2:
DE H:
KW T:
KW a:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT THE RESULT OF THE RESUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  80
                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                             Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16-JUL-1990; 058976.
18-JUL-1989; US-381080.
11-DEC-1989; US-450329.
07-FEB-1990; US-479661.
(SYNE-) SYNERGEN INC.
WPI; 91-073847/11.
                                                                         JLT 11
R11082 standard; Pro1
R11082;
24-MAY-1991 (first 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tumour necrosis factor inhibitor - for suppression of TNF-alph and -beta, useful as therapeutic agent.

Disclosure; Fig 21; 142pp; English.

The sequence comprises the entire 30 kD TNF inhibitor. The clo from which the sequence was deduced was isolated from a cDNA library prepd. from RNA form U937 cells treated with PMA/PHA. library prepd. from sector 1010 to expression vectors for pre of TNF inhibitor for use in the treatment of inflammatory and degenerative diseases. The active protein is claimed (Claim 8 degenerative diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LT 10
R10986
R10986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Xey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      degenerative diseases. The 
See also R10984 and R11001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cleavage_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tumour necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30kD TNF inhibitor precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-JAN-199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AU9058976-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13-MAY-1991 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                     161
                                                                                                                                                                                                                                                                                                                                                                                             101
                                                                                                                                                                                                                                                                                                                                            83
                                                                                                                                                                                                                                                                                                                                                                                                                                              83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41
                                                                                                                                                                                                                                                                                                                                                                     scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           kqntvctchagfflrenecvscsnckkslectklclpqienvkgtedsgtt 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           dsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhcl 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                            SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           52.0%;
1 Similarity 100.0%;
171; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            h 52.0%;
Similarity 100.0%;
171; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              455 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         40..41
note="
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 factor; inhibitor.
                                                                                                                                  Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cleavage gives
                                                                                                                                  455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1322; DB 2;
Pred. No. 4.69e-120;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1322; DB 8;
Pred. No. 4.69e-120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            active
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                vectors for prepn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of TNF-alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

24-MAY-1991 (1997)
Human 55kD TNP-binding protein.
Tumour Necrosis Factor; binding proteins; septic shock;
Tumour Necrosis Factor; binding proteins; cytokine.

```
PR COSS COST HEROTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
              770103 standard; Protein; 90 R70103; 02-NOV-1995 (first entry) 02-NOV-1995 (first entry) TNF-R-GBP 130 fusion protein Hybrid peptide; malaria para red blood cell; cytokine rec GBP 130; GBPH; glycophorin k Chimeric Homo sapiens. Chimeric Plasmodium falcipar W09506737-A. 09-MAR-1995. 01-SEP-1994; GB-018350. 23-AUG-1994; GB-018350. 23-AUG-1994; GB-017021.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EP-417563-A.
20-MAR-1991
31-AUG-1990; 116707.
12-SEP-1989; CH-003319.
08-MAR-1990; CH-000746.
20-APR-1990; CH-001347.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Partial amino acid sequences were determined for the 55 and 75kD TNF-BPS (see Ri1072-Ri1081) and oligonucleotide primers were synthesised based on these partial sequences. The primers were used to produce a cDNA fragment for use as aprobe to screen a human placental cDNA bank constructed in lambda gtll. Positive clones were identified and sequenced. DNA constructs comprising the TNF-BP coding sequence may also contain a fragment encoding a human Ig domain.

Recombinant constructs are used to transform cells to confer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              improved INF-binding properties. See also Q10956. Sequence 455 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Insoluble tumour necrosis factor binding encoding them, useful in pharmaceutical particular in the control of t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HOFF ) HOFFMANN-LA
Brockhaus M, Dembic
Schlaeger EJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 modified_site
                                                                                                                                                                                                                                                                                                                                                                                                                            143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4
                                                                                                                                                                                                                                                                                                                                                                                                                                               kqntvctchagfflrenecvscsnckkslectklclpqienvkgtedsgtt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               dsvcpqgky1hpqnns1cctkchkgty1yndcpgpgqdtdcrecesgsftasenh1rhc1 100
                                                                                                                                                                                                                                                                                                                                                                                                                       KONTYCTCHAGFFLRENECYSCSNCKKSLECTKLCLPQIENVKGTEDSGTT
                                                                                                                                                                                  d peptide; malaria parasite; Plasmodium falciparum;
lood cell; cytokine receptor; glycophorin binding po
30; GBPH; glycophorin binding peptide homologue; gly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1; F1g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ch 52.0%;
l Similarity 100.0%;
171; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q10955
; G01900.
; GB-018350.
; GB-017021.
NDERGAST K F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /label=
212..230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /label=
270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /label=
151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /label-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ROCHE
Z, Gen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ..230
                                                                                                                                         falciparum
                                                                                                                                                                                                                                                          protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gentz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           signal peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      transmembrane region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               putative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               putative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           putative
                                                                                                                                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1322; DB 2; 1
Pred. No. 4.69e-120;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Z,
                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lesslauer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-glycosylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-glycosylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-glycosylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-glycosylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  proteins -
prods. and i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lotscher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels

    and DNA
for antibody

                                                                                                                                                                                um; fusion protein; g peptide 130; glycophorin A.
                                                                                                                                                                                                                                                                                                                                                                                                                       193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
RESULT RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IT malaria parasite peptide capable of binding a red blood cell and a receptor peptide.

Example A: Page 46-47; 93pp; English.

CC Hybrid peptides for binding cytokines, comprising a malaria parasite CC (Plasmodium falciparum) peptide (capable of binding to a red blood CC (Plasmodium falciparum) peptide are claimed. R70103-25 are examples CC (Plasmodium falciparum) peptide are claimed. R70103-25 are examples CC (Plasmodium falciparum) peptide are claimed. R70103-25 are examples CC (Plasmodium falciparum) peptides are claimed. R70103-25 are examples CC (Plasmodium falciparum) peptides. R70103 is a fusion of tumour necrosis factor CC (Plasmodium falciparum) peptides. R70103 is a fusion of tumour necrosis factor CC (Plasmodium falciparum) peptides. R70103 is a fusion of tumour necrosis factor CC (Plasmodium falciparum) peptides from correction from the use of cytokine can bind CC (Plasmodium falciparum) peptides. R70103 is a fusion of the RBC without deleterious effect. The RBC protects the hybrid peptides from excretion from the kidney, and due to steric CC (Plasmodium falciparum) peptides. R70103 is a fusion of the BRA 175 (175 kDa erythrocyte binding antigen), CC (Plasmodium falciparum) peptides. R70103 is a fusion of the BRC withibited by Plasmodium vivax). These peptides CC (Plasmodium falciparum) peptides are the surface of RBCs. The hybrid peptides are thus used to lower the levels of free cytokines in the circulation to reduce pathological falsmodium falciparum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 17
                                                                                                                                                                                                                                            W09506737-A.
09-MAR-1995.
01-SEP-1994; G01900.
03-SEP-1993; GB-01835
23-AUG-1994; GB-01707
(PREN/) PRENDERGAST F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hybrid peptide; malaria parasite; Plasmodium falciparum; fusion protein; red blood cell; cytokine receptor; glycophorin binding peptide 130; GBPH; glycophorin binding peptide homologue; glycophorin A; tumour necrosis factor receptor; TNF-R. Chimeric Homo sapiens.

Chimeric Plasmodium falciparum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 95-113-2...
New hybrid peptide(s)
malaria parasite pept
a receptor peptide.

Example A; Page 54-55; 93pp; English.

Hybrid peptides for binding cytokines, comprising a malaria parasite
(Plasmodium falciparum) peptide (capable of binding to a red blood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           T 13
R70108 standard; Protein;
R70108;
10-NOV-1995 (first entry)
                                                                                                                                                          Prendergast KF;
WPI; 95-115452/15.
New hybrid peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     key Location/Qualifiers misc_difference 230..269
                                                                                                                      New hybrid peptide(s) for binding malaria parasite peptide capable o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TNF-R-GBPH fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 camage.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Prendergast KF;
WPI; 95-115452/15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KONTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTTA 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      kqntvctchagfflrenecvscsnckkslectklclpqlenvkgtedsgtna 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ch 52.0%;
l Similarity 99.4%;
171; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  900
                                                                                                                                                                                                                                            ; GB-018350.
; GB-017021.
NDERGAST K F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA,
                                                                                                                                                                                                                                                                                                                                                                                                                             number"
                                                                                                                                                                                                                                                                                                                                                                                                                                                  /label= repeat_region
/note= "can be repeated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              for binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 1321; DB 13;
Pred. No. 5.93e-120;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                      g cytokine(s)
of binding a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                j cytokine(s)
of binding a
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ¤
                                                                                                                                                                                                                                                                                                                                                                                                                                                     times,
                                                                                                                            Q.
                                                                                                                            red
                                                                                                                            comprising a blood cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   comprising a
ed blood cell and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 900;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                            and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

888888888888888888

```
CC cell (RBC)) and a receptor peptide are claimed. R70103-25 are examples CC of these hybrid peptides. R70108 is a fusion of tumour necrosis factor CC receptor (in accordance with H Loetscher et al Cell, Vol. 61, 351-359) CC and glycophorin binding protein (GBP) homologue (GBPH). The CC use of cytokine receptors not normally found on RBCs means that the CC cytokine can bind harmlessly to the RBC without deleterious effect. CC The RBC protects the hybrid peptides from excretion from the kidney, and CC due to steric hindrance prevents the cytokines binding to a receptor in CC another cell. GBP 130 or GBPH are the prefd. malaria parasite peptides CC used, others include EBA 175 (175 kDa erythrocyte binding artigen), PMMSA (pre major merozoite surface antigen) and the Duffy binding receptor CC molecule (eg. exhibited by Plasmodium vivax). These peptides bind to CC pref. glycophorin A, B and C, stalo glycoproteins, found on the surface CC cytokines in the circulation to reduce pathological damage.
веят Local
Matches 1
                                                                                                                                      DNA encoding TNF binding protein and TNF- receptor - used in tumour treatment and to understand mechanismsm to TNF action Disclosure; Fig 91(1-2); 51pp; German.

StandarNF-R8 (Q06284) was used to screen the HS913T cDNA library. ClambdarNF-R2 encodes the complete human TNF-R2 and was used to construct a plasmid (pADTNF-R) expressing the product the same way as pADTNF-BP (see Q06282). The expressed proteins are useful prophylactically and therapeutically to control disorders which involve the damaging effects of TNF-alpha or -beta (e.g. infectious or parasitic diseases, shock, cachexia, autoimmune diseases, adult respiratory distress syndrome etc., or side effects of treatment with assaying TNF and in study of TNF-receptor interactions.

See also Q06282-Q06285.
                                     Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human Tumour Necrosis Factor-Receptor from lambdaTNF-R2 cDNA insert. Tumour necrosis factor binding protein; TNF-BP; TNF-receptor; infectious disease; parasitic disease; cachexia; autoimmune disease; shock; lambdaTNF-R2; raTNF-R8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hauptmann R. Himmler A. Maurer-Fogy I, Stratowa WPI; 90-321987/43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-APR-1990; 106624.
21-APR-1989; DE-913101.
21-JUN-1989; DE-920282.
(BOEH ) BOEHRINGER INGELHEIMINT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R07451 standard;
R07451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EP-393438-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             140 kgntvctchagfflrenecvscsnckkslectklclpqienvkgtedsgts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20 dsvcpqgky1hpqnns1cctkchkgtylyndcpqpgqdtdcrecesgsftasenhlrhcl 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity 99.4%, es 170; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KONTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
        170;
                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               309 AA;
                                                                                                                    455 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein; 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        51.98;
                                   51.9%;
  Score Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 1319; DB Pred. No. 9.50e-1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₿
  re 1319; DB 2; L
d. No. 9.50e-120;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          e 1319; DB 13;
. No. 9.50e-120;
Mismatches 0;
                                                       Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      193
  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              82
                                                                                                                                                                                                                                                                                     ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
  0
```

QΥ 밁 á ₽

Ş 밁

밁

41 dsvcpqgkyihpqnnsicctkchkgtylyndcpgpgqdtdcrecesgsftasenhlrhcl 100

Search completed: Wed Job time: 131 secs.

мау

σ

09:09:10 1998

```
RESULTANT OF THE PROPERTY OF T
                                                                                                                   Ωy
                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
Ş
                                                                밁
                                                                                                                                                                                                                                             δã
                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     receptor peptide.

Example A; Page 47-48; 93pp; English.

CC Hybrid peptides for binding cytokines, comprising a malaria parasite (Plasmodium falciparum) peptide (capable of binding to a red blood CC cell (RBC)) and a receptor peptide are claimed. R70103-25 are examples of these hybrid peptides. R70104 is a fusion of tumour necrosis factor creceptor (in accordance with H Loetscher et al Cell, Vol. 61, 351-359) CC and glycophorin binding protein (GBP) homologue (GBPH). The use of CC cytokine receptors not normally found on RBCs means that the cytokine receptors not normally found on RBCs means that the CC cytokine can bind harmlessly to the RBC without deleterious effect. CC The RBC protects the hybrid peptides from excretion from the kidney, and CC due to steric hindrance prevents the cytokines binding to a receptor in CC another cell. GBP 130 or GBPH are the prefd. malaria parasite peptides used, others include EBA 175 (175 kDa erythrocyte binding antigen), PMMSA (pre major merozoite surface antigen) and the Duffy binding receptor conlecule (eg. exhibited by Plasmodium vivax). These peptides bind to pref. glycophorin A, B and C, sialo glycoproteins, found on the surface cytokines in the circulation to reduce pathological damage.

Se Sequence 547 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ρ
                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-SEP-1994;
03-SEP-1993;
23-AUG-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chimeric Homo sapiens.
Chimeric Plasmodium falciparum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hybrid peptide; malaria parasite; Plasmodium falciparum; fusion protein; red blood cell; cytokine receptor; glycophorin binding peptide 130; GBP 130; GBPH; glycophorin binding peptide homologue; glycophorin A; tumour necrosis factor receptor; TNF-R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New hybrid peptide(s) for binding cytokine(s) - comprising a malaria parasite peptide capable of binding a red blood cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Prendergast KF;
WPI; 95-115452/15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-SEP-1993; GB-018350.
23-AUG-1994; GB-017021.
(PREN/) PRENDERGAST K F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9506737-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TNF-R-GBPH fusion protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R70104;
02-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             T 15
R70104 standard;
   143
                                                                140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              83
                                                                                                                      83
                                                                                                                                                                                80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23
                                                                                                                                                                                                                                                23
                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                          scskcrkemgqveissctvdrdtvcgcrkngyrhywsenlfqcfncslclngtvhlscqe 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                   kqntvctchagfflrenecvscsnckkslectklclpqienvkgtedsgts
                                                                                                                      SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                   scskcrkemgqveissctvdrdtvcgcrknqyrhywsenlfqcfncslclngtvhlscqe 139
   KONTYCTCHAGFFLRENECYSCSNCKKSLECTKLCLPQIENYKGTEDSGTT
                                                                                                                                                                                                                                                                                                                                                                       l Similarity
170; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                    51.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                547
                                                                                                                                                                                                                                                                                                                                                                    Score 1319; DB 13;
Pred. No. 9.50e-120;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                              Length 547;
                                                         190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             211
   193
                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        82
                                                                                                                                                                                                                                                                                                                                                                       0
```

· 安全的 经存储 计多数 计多数 计多数 计多数 计多数 计多数 计多数 计多数 化二氯甲基苯酚 医多种	
*********	
*****	
*******	
******	
******	(ME)
*	) x

Release 3.0.5AA John F. Collins, Biocomputing Research Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd Unit.

\*

MPsrch\_pp Run on: protein - protein database search, using Smith-Waterman algorithm

Tabular output not generated Wed May 6 09:05:45 1998; MasPar time 14.61 Seconds 839.893 Million cell updates/sec

Sequence: Description: Perfect Score: >US-08-804-166-8
(1-336) from US08804166.pep
2541 SRTSLLLAFGLLCLPWLQEG......PSLPSPSRLPGPSDTPILPQ 336

Scoring table: PAM 150 Gap 11 Gap

120446 seqs, 36531193 residues

Post-processing: Minimum Match 0% Listing first 45 Searched

summaries

Database:

pir56 1:pir1 2:pir2 3:pir3 4:pir4 5:nrl3d

Statistics: Mean 42.414; Variance 82.038; scale 0.517

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Result	Score 1322 1257 1257 1238 1121 1103 11030 11030 11030 11030 11030 11030 11030		Length 1555 1601 158 1140 1145 1145	- N N N N N N N N N N N N N N N N N N N	GOHUTI IEXTA IEXTA IEXTB INCFB ITURR INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA INCFA	9 09 11 11
. 987	1030		145 165	222	I37412 KTHUB JC4302	beta-gonadotro choriogonadotro tumor necrosis
111	960 960	37.8 37.8	145 454	) <del>-</del>	137231 GQMST1	beta-gonadotro
13	944	37.2	461	٠ د	GORTT1	tumor necrosis
14 15	857 803	33.7 31.6	165 110	5 L	KTBAB 1XULB	choriogonadotropin be
16 17	803 803	31.6	110	лU	1 HCNB	Human chorionic gonad
18	740	29.1	121	Nυ	137994	cnorionic gonadotropi beta-LH - human (fraç
19	709	27.9	115	ىر د	UTHUB	۵,
20 21	614	24.2	141 141	27	UTBOB 146949	lutropin beta chain luteinizing hormone
22 23	0 L 4	ر د	169	_		

REFERENCE #authors

#journal #title

A34900
Schall, T.J.; Lewis, M.; Koller, K.J.; Lee, A.; Rice, G.C.; Wong, G.H.W.; Gatanaga, T.; Granger, G.A.; Lentz, R.; Raai H.; Kohr, W.J.; Goeddel, D.V.
Cell (1990) 61:361-370
Molecular cloning and expression of a receptor for human tumor necrosis factor.

Raab,

#cross-references MUID:90235285
#accession A34900

##molecule\_type mRNA
##residues 1-455 ##label
##cross-references GB:M33294;

SCH NID:g339744; PID:g339745

45	44	43	42	41	40	39	38	37	36	35	34	<b>ω</b>	32	31	30	29	28	27	26	25	
352	361	366	368	388	398	403	405	407	411	416	420	426	427	430	582	585	587	594	595	597	
13.9	14.2	14.4	14.5	15.3	15.7	15.9		16.0		16.4	16.5	16.8	16.8	16.9	22.9	23.0	23.1	23.4	23.4	23.5	
159	147	166	158	142	142	140	112	113	142	142	119	146	141	144	141	118	138	141	118	141	
N	N	N	N	N	N	N	N	N	N	N	N	2	N	٢	N	N	N	<b>J-4</b>	N	ш	
I51373	I50994	I51242	A61091	150143	A25800	A48166	S21196	S07092	151232	C36179	S09344	S16763	в60626	UTCAB	JC4527	PN0141	S00512	UTSHB	PN0139	UTRTB	
luteinizing hormone b	gonadotropin II beta	luteinizing hormone b	lutropin beta chain p	gonadotropin II beta	beta cha	gonadotropin II beta	lutropin beta chain -	gonadotropin beta cha	gonadotropin II beta	gonadotropin II beta	gonadotropin II beta	gonadotropin beta cha	gonadotropin beta cha	gonadotropin beta cha	ormone b	n beta chain -	n beta chain p	n beta chain p	lutropin beta chain -	lutropin beta chain p	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
6.08e-47	9.80e-49	9.84e-50	3.92e-50	3.81e-54	3.68e-56	3.59e-57	1.42e-57	5.58e-58	8.65e-59	8.39e-60	1.29e-60	7.82e-62	4.90e-62	1.20e-62	4.90e-94	1.16e-94	4.42e-95	1.52e-96	9.36e-97	3.57e-97	

ALIGNMENTS

#### TITLE CONTAINS ORGANISM DATE RESULT ENTRY REFERENCE REFERENCE ACCESSIONS #authors Loetscher, H.; Pan, Y.C.E.; Lahm, H.W.; Gentz, R.; Brockhaus, M.; Tabuchi, H.; Lesslauer, W. #journal Cell (1990) 61:351-359 #title Molecular cloning and expression of the human 55 kd tumor necrosis factor receptor. #cross-references MUID:90235284 #accession A34899 #authors #journal #title #accession A34899 ##molecule\_type mRNA #accession ##molecule\_type DNA ##residues 1-455 ##label FUC ##residues 1-455 ##label FUC ##cross-references GB:M75864; GB:M75865; GB:M75866; NID:g339748; ##cross-references FID:g339750 ##residues 1-455 ##label LOE ##cross-references GB:M58286; GB:M33480; NID:g339753; PID:g339754 ##experimental\_source placenta ##enote part of this sequence, including the amino end of the mature protein, confirmed by protein sequencing Fuchs, P.; Strehl, S.; Dworzak, M.; Himmler, A.; Ambros, P.F. Genomics (1992) 13:219-224 Structure of the human TNF receptor 1 (p60) gene (TNRF1) and localization to chromosome 12p13. tumor necrosis factor receptor type 1 precursor - humanALTERNATE\_NAM tumor necrosis factor alpha inhibitor; tumor necrosis factor binding protein 1 (TNF blocking factor) #formal\_name Homo sapiens #common\_name man 30-Jun-1992 #sequence\_revision 30-Jun-1992 #text\_change 24-Oct-1997 A38208; A34899; A34900; A36555; C36555; A38281; S12057; JT0758; A60231; A38258; A60594; A35010; JC2404 A38208 GQHUT1 #type complete

```
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
#authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #authors Nophar, Y.; Kemper, O.; Brakebusch, C.; Engelmann, H.; Zwang, R.; Aderka, D.; Holtmann, H.; Wallach, D.
#journal EMBO J. (1990) 9:3269-3278
#title Soluble forms of tumor necrosis factor receptors (TNF-Rs).
The cDNA for the type I TNF-R, cloned using amino acid sequence data of its soluble form, encodes both the cell surface and a soluble form of the receptor.
#cross-references.MUID:91006021
                                                                                                                                                                                                                                                                                                    #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #journal Proc. Natl. Acad. Sci. U.S.A. (1990) 87:7380-7384

*title Cloning of human tumor necrosis factor (TNF) receptor cDNA

and expression of recombinant soluble TNF-binding protein

#cross-references MUID:91017509

#accession A38281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #journal
#title
                                                                                                                                                                                       *cross-references MUID:90292116 
*accession A60231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #journal
                                                                                                                                                                                                                                                                                                                                                                                     #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *cross-references MUID: 91090841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ##molecule_type protein
##residues 30-38;41-53,'X',55-79,'XX',82-94,'NK';'XX',100-104;
##residues 107-128:162-167,'X',169-201 ##label HI2

the purified protein, called tumor necrosis factor
binding protein, is a soluble derivative of the
                                                                                                                                                                                                                                                                                                                                                                                                                                        ##residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ##residues 1-455 ##label NOP
##cross-references EMBL:X55313; NID:g37223; PID:g37224
##note parts of soluble TNF binding protein 1, including its
amino and carboxyl ends, were confirmed by protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ##cross-references GB:M63121; NID:g339755; PID:g339756
                                                                                                                        ##molecule_type protein
##residues 41-43,'X',45-53,'X',55-57 ##label SEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ##residues 1-455 ##label GRA
##cross-references GB.M37764
##cross-references de M37764
the authors translated the codon TGG for residue 371
##note Thr, AAG for residue 372 as Leu, and GAC for residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                               **molecule_type DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       **molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  **molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ##molecule_type mRNA
A38258
Gatanaga, T.; Hwang, C.; Kohr, W.; Cappuccini, J.A.; Jeffes, E.W.B.; Lentz, R.; Tomich, J.; R.S.; Granger, G.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gene (1993) 134:209-216
Cloning and partial characterization of the promoter for
human p55 tumor necrosis factor (TNF) receptor.
JT0758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Himmler, A.; Maurer-Fogy, I.; Kroenke, M.; Scheurich, P. Pfizenmaier, K.; Lantz, M.; Olsson, I.; Hauptmann, R.; Stratowa, C.; Adolf, G.R.
DNA Cell Biol. (1990) 9:705-715
Molecular cloning and expression of human and rat tumor necrosis factor receptor chain (p60) and its soluble derivative, tumor necrosis factor-binding protein.
                                                                                                                                                                                                                                        Eur. J. Immunol. (1990) 20:1167-1174

Tumor necrosis factor inhibitor: purification, NH-2-terminal amino acid sequence and evidence for anti-inflammatory and immunomodulatory activities.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kemper, O.; Wallach,
Gene (1993) 134:209-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C36555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A36555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gray, P.W.; Barrett, K.; Chantry, D.; Turner,
                                                                                                                                                                                                                                                                                                                                                                               Seckinger, P.; Vey, E.; Turcatti, G.; Wingfield, P.; Dayer,
                                                                                                                                                                                                                                                                                                                                                                                                                 A60231
                                                                                                                                                                                                                                                                                                                                                     G.X
                                                                                                                                                                                                                                                                                                                                                                                                                                        1-13 ##label KEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 as Asn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         M.; Feldmann,
                                                                          F.; Lucci III,
                                                   Yamamoto,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 as
```

```
KEYWORDS
FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                              SUMMARY
Query Match 52.0%;
Best Local Similarity 100.0%;
Matches 171; Conservative
                                                                                                                                                                                                                                             84-126
127-167
168-196
212-234
235-455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ##cross-references GDB:125913; OMIM:191190
#map_position 12p13.2-12p13.2
#introns 13/3; 65/1; 108/1; 158/1; 184/2; 209/1; 247/1; 256/3; 353/1
#SSIFICATION #superfamily tumor necrosis factor receptor type 1; NGF
receptor repeat homology
WWORDS duplication; glycoprotein; receptor; transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #authors
#journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #authors
#journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human cancer patients.
#cross-references MUID:91062364
#accession A38258
                                                                                                                                                                                                                                                                                                                                                                                                                            44-82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-211
41-201
                                                                                                                                                                                                               54,145,151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #cross-references MUID:90110215
#accession A35010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22-455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ##experimental_source urine
This protein is one of two
(cachectin) and TNF-beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ##molecule_type protein
##residues 41-60 #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ##experimental_source normal urine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ##residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ##molecule_type protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ##experimental_source renal failure patient urine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ##molecule_type protein
##residues 41-43,'X',45-53,'V',55-57,'XK',60 ##label
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ##experimental_source cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Olsson, I.; Lantz, M.; Nilsson, E.; Grubh, A.; Adolf, G.
Eur. J. Haematol. (1989) 42:270-275
Isolation and characterization of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JC2404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Engelmann, H.; Novick, D.; Wallach, D.
J. Biol. Chem. (1990) 265:1531-1536
Two tumor necrosis factor-binding proteins purified from human urine. Evidence for immunological cross-reactivity with cell surface tumor necrosis factor receptors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Proc. Natl. Acad. Sci. U.S.A. (1990) 87:8781-8784 purification and characterization of an inhibitor (solub) tumor necrosis factor receptor) for tumor necrosis fact and lymphotoxin obtained from the serum ultrafiltrates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GDB: TNFR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rajihara, J.; Asada, A.; Kirihara, S.; Kato, K. Biosci. Biotechnol. Biochem. (1994) 58:2266-2268 Amino acid sequence of natural tumor necrosis fainhibitor purified from human urine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A60594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A60594
                                                                                                                                       #length 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       binding protein from urine.
                                                                                                                                                                                                 #domain extracellular *status predicted *label EXT\
*product TNF binding protein 1 (tumor necrosis factor
alpha inhibitor) *status experimental *label TBP1\
*domain NGF receptor repeat homology *label NG2\
*domain NGF receptor repeat homology *label NG3\
*domain NGF receptor repeat homology *label NG3\
*domain NGF receptor repeat homology *label NG4\
*domain NGF receptor repeat homology *label NG4\
*domain NGF receptor repeat homology *label NG4\
*domain transmembrane *status predicted *label NEM\
*domain intracellular *status predicted *label NT\
*domain intracellular *status predicted *label NT\
*status predicted *l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41-45 ##label ENG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #domain signal sequence #status predicted #label SIG\
#product tumor necrosis factor receptor type 1 #status
predicted #label MAT\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ##label KAJ
                                                                                                                                                                    predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ##label
                                                                                                                                       #molecular-weight 50494 #checksum 153
                                Score 1322; DB 1; Pred. No. 9.45e-253;
   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       patient serum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           known receptors (lymphotoxin).
                                                              Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tumor necrosis factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peetre,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for
   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                both TNF-alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C.; Thysell, H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        210
   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (soluble
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               factor
   0
```

밁

41 DSVCPQGKY1HPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 100

```
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PDB_TITLE
                                                                                                                                                                                                                                                                                                                                  FEATURE
                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                        43-58
61-76
64-84
86-102
105-117
108-125
127-138
                                                                                                                                                                                                                                         141-143
151-154
7-9,17-19
131-134,137-140
25-29,39-42
                                                                                                                                                                                                                                                                                                                                                                                                                                    #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #journal #title
                                                                                                                                                        18-31
21-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #cross-references PDB:1EXT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #authors
                                                                                                                                                                                                                  90-96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #authors
                                                                                                                                                                                                   11-115,124-127
                                                                                                                                                                                                               1-74,83-85
0-96,99-104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          161 KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KONTYCTCHAGFFLRENECYSCSNCKKSLECTKLCLPQIENYKGTEDSGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                            R-value: no re
binding
                                                                                                                                                                                                                                                                                                                                                                        Resolution: 1.85 angstroms
Determination: X-ray diffraction
                                                                                                                                                                                                                                                                                                                                                                                                                                              Banner, D.W.; D'Arcy, A.; Janes, W.; Gentz, R.;
H.J.; Broger, C.; Loetscher, H.; Lesslauer, W.
Cell (1993) 73:431-445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Naismith, J.H.; Devine, T.Q.; Brandhuber, B J. Biol. Chem. (1995) 270:13303
Crystallographic evidence for dimerization tumor necrosis factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tumor necrosis factor receptor extracellular domain, chain a extracellular domain of the 55kda tumor necrosis factor receptor. crystallized at ph3.7 in p 21 21 21. september of the spiens $common_name man expressed in Escherichia coli, the construct contains residues 12 to 172 of the mature sequence of the entire receptor. residue 11 is mutated to met as a result of the
                                                                                                                                                                                                                                                                                                                                                                                                                Crystal structure of the soluble human 55 kd TNF receptor-human TNFbeta complex: implications f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  K.; Naismith, J.H.; Sprang, S.R.
J. Mol. Biol. (1994) 239:332
Two crystal forms of the extracellular domain
             #length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A40737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rodseth,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Naismith, J.H.; a submitted to the
                                                                                                                                                                                                                                                                                                                                                                                                   receptor activation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                K.; Naismith,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        necrosis factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         expression system
                                                                                                                                                                                                                                                                                                                                                           no refinement
                                                                                                                                                                                                                             #region beta sheet\
#region beta sheet\
#region beta sheet\
#region beta sheet\
                                                                                                                                                                                                                                                                                    #region
#region
                                                        #disul
#disul
#disul
#disul
#disul
#disul
#disul
                                                                                                                                                                      #disul
                            #disulfide_bonds\
#disulfide_bonds
                                                                                                                                                                                                   region
                                                                                                                                                                                                                                                                                                                                            protein; cytokine; signalling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               L.E.; Brandhuber, B.; Devine,
                                                                                                                                                                                                                  9
                                                                                                                           ulfide_bonds\
ulfide_bonds\
ulfide_bonds\
                                                     lfide_bonds\
lfide_bonds\
lfide_bonds\
lfide_bonds\
lfide_bonds\
                                                                                                                                                                      fide_bonds\
                                                                                                                                                                                   fide_bonds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #type complete
                                                                                                                                                                                                beta sheet\
beta sheet\
                                                                                                                                                                                                                                                                                    helix (right hand 3-10)\
helix (right hand 3-10)\
helix (right hand alpha)\
           #molecular-weight 18065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sprang, S.R.
e Brookhaven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Protein Data Bank, July 1996
                                                                                                                                                                                                                                                                                                                                              protein
              #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               T.Q.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B.J.; Sprang, S.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of unliganded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eck, M.J.; Hale,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schoenfeld,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    type i tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
#authors
#journal
#title
                                                                                                                                                                                                                                             FEATURE
68-70
                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
#authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PDB_TITLE
                                                                                                                                        143-145
9-11,19-21
133-136,139-142
27-31,41-44
73-76,85-87
92-98,101-106
113-117,126-129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 49.5%;
Best Local Similarity 100.0%;
66-86
88-104
107-119
110-127
129-140
                                                                  20-33
23-42
45-60
63-78
                                                                                                                                                                                                                                                                                                                                                                                                                                             #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #note
                                                                                                                                                                                                                                                                                                                                                                       #journa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #cross-references PDB:1EXT
                                                                                                                                                                                                                                                                                                                                                                                                    #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEK 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIEN 183
                                                                                                                                                                                                                                                                   Resolution: 1.85 angstroms
Determination: X-ray diffraction
R-value: no refinement
binding protein; cytokine; signalling protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               160;
                                                                                                                                                                                                                                                                                                                                                                     Banner, D.W.; D'Arcy,
H.J.; Broger, C.; Lo
Cell (1993) 73:431-445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A65560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TN026252
                                                                                                                                                                                                                                                                                                                                                                                                                   A40737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rodseth, L.E.; Brandhuber, B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TN026251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                 necrosis factor receptor.
                                                                                                                                                                                                                                                                                                                               receptor activation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 expression system
          #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
                                                                                                                                                                                               #region
#region
#region
                                                                    #disulfide_bonds\
#disulfide_bonds\
                                                                                                                                                     #region
                                                                                                                                                                      #region
                                                                                               #disulfide_bonds\
                                                                                                               #disu
                                                                                                                                                                                  #region
                                                                                                                           #disulfide_bonds
                                                                                                                                          #region
                                                                                                                                                                                                                                          region
                                                                                                            fide_bonds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #type complete
                                                                                                                                                                    beta sheet\
beta sheet\
beta sheet\
beta sheet\
beta sheet\
                                                                                                                                        beta sheet\
beta sheet\
                                                                                                                                                                                                                           helix (right
helix (right
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred.
                                                                                                                                                                                                                                                                                                                                                                                      Loetscher,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                    Α..
```

```
Score 1257; DB 5;
Pred. No. 1.30e-238;
                                     Length 160;
                   Indels
                  0,
                  Gaps
60
                   0
```

SVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLS SVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLS 83

QNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIEN 160

tumor necrosis factor receptor extracellular domain, extracellular domain of the 55kda tumor necrosis fact receptor. crystallized at ph3.7 in p 21 21 21. #formal\_name Homo sapiens #common\_name man factor chain

expressed in Escherichia coli, the construct contains residues 12 to 172 of the mature sequence of the entire receptor, residue 11 is mutated to met as a result of the

Naismith, J.H.; Sprang, S.R. submitted to the Brookhaven Protein Data Bank, July 1996 S.R.

Naismith, J.H.; Devine, T.Q.; Brandhuber, B.J.; Sprang, J. Biol. Chem. (1955) 270:13303 Crystallographic evidence for dimerization of unliganded tumor necrosis factor receptor. Devine, T.O.;

K.; Naismith, J.H.; Sprang, S.R. J. Mol. Biol. (1994) 239:332 Two crystal forms of the extracellular domain Eck, M.J.; Hale, of type i tumor

Janes, W.; Gentz, R cher, H.; Lesslauer, Gentz, R.; Schoenfeld,

Crystal structure of the soluble human 55 kd TNF receptor-human TNFbeta complex: implications for for

hand 3-10)\ hand 3-10)\

```
COMMENT
REYWORDS
FEATURE
2-16
17-30
20-39
42-57
60-75
60-75
104-116
104-116
107-124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                밁
                                                                                                                                                                                                                                  SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ALTERNATE_NAMES
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                    Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             143-156
146-152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *cross-references PDB:1NCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #authors
#submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         122 KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLP 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
        25
N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KONTYCTCHAGFFLRENECVSCSNCKKSLECTKLCLP 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             receptor activation.
Resolution: 2.25 angstroms
Determination: X-ray diffraction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R-value: no refinement binding protein; cytokine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ch 48.7%;
l Similarity 100.0%;
157; Conservative
                                                                                                                 h 44.1%;
Similarity 100.0%;
142; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H.J.: Broger, C.; Loetscher, n., Louis H.J.: Loetscher, n., 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rodseth, L.E.; Brandhuber, B.; Devine, T.Q.; Eck, K.; Naismith, J.H.; Sprang, S.R. J. Mol. Biol. (1994) 239:332

Two crystal forms of the extracellular domain of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #disulfide_bonds\
#disulfide_bonds
#length 158 #molecula;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Banner, D.W.; D'Arcy, A.; Janes, W.; Gentz, R.;
H.J.; Broger, C.; Loetscher, H.; Lesslauer, W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #formal_name Homo sapiens #common_name man expressed in Escherichia coli, residue il is as a result of the expression system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       stnfr1; type i receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tumor necrosis factor receptor 55 kd extracellular domain contains residues 12 172 of the mature receptor sequence chain B - hu
                                                                                                                                                                                                                                  #length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A40737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TN029041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Naismith,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A66195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    necrosis factor receptor.
                                                                                                                                                                                                                                                                                 #disulfide_bonds\
                                                                                                                                                                                                                          #disulfide_bonds
th 142 #molecular-weight 16046 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J.H.; Sprang, S.R.
to the Brookhaven Protein Data
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #molecular-weight 17827 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 1238; DB 5; L
Pred. No. 1.74e-234;
Pred. No. 1.74e-234;
                                                                                                                 Score 1121; DB 5; 1
Pred. No. 4.07e-209;
0; M1smatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        signalling protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 158;
                                                                                                                                                                        Length 142;
                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T.Q.; Eck, M.J.; Hale,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bank,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mutated to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 October
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schoenfeld,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              type i tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence,
                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                met
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                 0
```

```
KEYWORDS
FEATURE
1-15
16-29
19-38
41-56
59-74
59-74
100-123
106-123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #cross-referen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
#authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                     S
                                                                                                                                                                                      유
                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
   ALTERNATE_NAMES
                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                          121 TVCTCHAGFFLRENECVSC 139
                                                                                                                                                       146
                                                                                                                                                                                                                         86
                                                                                                                                                                                                                                         61 KCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                          26 CPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSCS
                                                                                                                                                                                                                                                                                                           1 CPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSCS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQ 120
                                                                                                                                                       TVCTCHAGFFLRENECVSC 164
                                                                                                                                                                                                                       KCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQN 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NTVCTCHAGFFLRENECVSCSN 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NTVCTCHAGFFLRENECVSCSN 166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQ 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            D'arcy, A.; Banner, D.W.; Janes, W.; Winkler, F.K.;
Loetscher, H.; Schoenfeld, H.J.; Zulauf, M.; Gent
Lesslauer, W.

J. Mol. Biol. (1993) 229:555

Crystallization and preliminary analysis of tnf-bet-
tnf-beta-55 kd tnf receptor complex.

Resolution: 2.85 angstroms
Determination: X.raydiffraction.
                                                                                                                                                                                                                                                                                                                                                              139;
                                                                                                                                                                                                                                                                                                                                                          h 43.5%;
Similarity 100.0%;
139; Conservative
tumor necrosis factor receptor 55 kd extracellular domain
contains residues 12 172 of the mature receptor sequence,
chain A - hu
stnfrl; type i receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H.J.; Broger, C.; Loetscher, H.; Lesslauer, W. Cell (1993) 73:431445
Crystal structure of the soluble human 55 kd TNF receptor-human TNFbeta complex: implications for receptor activation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               submitted to the Brookhaven Protein Data Bank, May
                                                                                       1NCFA
                                                                                                                                                                                                                                                                                                                                                                                                                            #length 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Complex(lymphokineRECEPTOR)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TN034093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Banner, D.W.; D'Arcy, A.; Janes, W.; Gentz, R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A40737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A52442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 recombinant form expressed in Baculovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tumor necrosis factor receptor type 1 (P55 extracellular
#formal_name Homo sapiens #common_name man
                                                                                                                                                                                                                                                                                                                                                                                                                                       #disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #disulfide_bonds\
                                                                                   #type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *type complete
                                                                                                                                                                                                                                                                                                                                                                                                                            #molecular-weight 15746 #checksum 5235
                                                                                                                                                                                                                                                                                                                                                        Score 1105; DB 5;
Pred. No. 1.18e-205;
0; Mismatches 0;
                                                                                   complete
                                                                                                                                                                                                                                                                                                                                                                                           Length 139;
                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tnf-beta and
                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Schoenfeld,
                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1994
                                                                                                                                                                                                                                                                                          85
                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                            0
```

9

chor

0

```
KEYWORDS
FEATURE
5-19
20-33
23-42
45-60
63-78
66-86
88-104
1107-119
110-127
129-140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                      TITLE
DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
#authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #cross-references PDB:1NCF
REFERENCE TN029039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
       GENETICS
                                                                                                                                                                                                                                                                           ACCESSIONS
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                              ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #note
                                                                                                                                             #authors Talmadge, K.; Vamvakopoulos, N.C.; Fiddes, J.C.
Nature (1984) 307:37-40

**Tournal Nature (1984) 307:37-40

**Tournal Nature (1984) 307:37-40

**Tournal Nature (1984) 307:40

**Tournal Nature (1984) 307:37-40

**Tou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #submission
                                                                                                                              #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #authors
                                                        preliminary; translated from ##molecule_type DNA #resiano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     122 KQNTVCTCHAGFFLRENEC 140
                         ##cross-references EMBL:X00265; NID:g31719
                                                   ##residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KONTVCTCHAGFFLRENEC 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Determination: X-ray d
R-value: no refinement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         receptor activation.
Resolution: 2.25 angstroms
Determination: X-ray diffraction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           43.2%;
1 Similarity 100.0%;
139; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Banner, D.W.; D'Arcy, A.; Janes, W.; Gentz, R. H.J.; Broger, C.; Loetscher, H.; Lesslauer, Cell (1993) 73:431-445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Crystal structure of the soluble human receptor-human TNFbeta complex: impli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A40737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rodseth, L.E.; Brandhuber, B.; Devine, T.Q.; Rodseth, J.H.; Sprang, S.R. J. Mol. Biol. (1994) 239-332
Two crystal forms of the extracellular domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Naismith, J.H.; Sprang, S.R. submitted to the Brookhaven Protein Data
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #formal_name Homo sapiens #common_name
expressed in Escherichia coli, residue
                                                                                                                                                                                                                                                                                                                                              beta-gonadotropin - human (fragment)ORGANISM 21-Feb-1997 #sequence_revision 21-Feb-1997 #t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #length 140
                                                                                                                                                                                                                                                                                                                                                                                                                            137412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           binding protein; cytokine; signalling protein
                                                                                                                                                                                                                                                                                                                          09-May-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            as a result of the expression system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       necrosis factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
                                              1-145 ##label_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                                         #type fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #molecular-weight 15889 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 1098; DB 5;
Pred. No. 3.86e-204;
0; Mismatches 0;
                                                                                                 GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    implications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gentz, R.; S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                man
11 is mutated to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55 kd TNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bank,
                                                                                                                                                                                                                                                                                                                                                 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eck, M.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ō,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 October
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Schoenfeld,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            type i tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                        #formal_name
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hale,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     met
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                        Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #Introns
CLASSIFICATION
                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #journal #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #authors Fiddes, J.C.; Goodman, H.M.
#journal Nature (1980) 286:684-687
#title The cDNA for the beta-subunit of human chorionic gonadotropin suggests evolution of a gene by readthrough into the 3'-untranslated region.
#cross-references MUID:81012134
#accession A93230
#accession
                                                                                                                                           #authors Policastro, P.F.; Daniels-McQueen, S.; Carle, #journal J. Biol. Chem. (1986) 261:5907-5916 #title A map of the hCG beta-LH beta gene cluster. #cross-references MUID:86195987 #accession 155250
                                                                                                                                                                                                                                                                                                                                                                                                                      #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           by multiple genes. #cross-references MUID:84008141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                        ##residues 1-165 ##label POL
##cross-references GB:K03189; NID:g180450; PID:g180453
##note clone CG-beta-e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ##residues 1-165 ##label FID
##cross-references GB:J00117; GB:M38559; GB:M54963; NID:g180436;
PID:g180437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   198 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTWTRVLQGVLPALPQVVCNYRDVRFES 257
                    ##note
                                                                  ##molecule_type DNA
##residues 1-5 ##label PO3
                                                                                                                                                                                                                                                                                                                                                              ##molecule_type DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     127 SLPSPSRLPGPSDTPILPQ 145
                                              ##cross-references GB:Ml3504;
                                                                                                                                                                                                                                                                                                ##note
                                                                                                                                                                                                                                                                                                                  ##residues 1-23,'M',25-136,'A',138-165 ##label PO2 ##cross-references GB:K03183; NID:g180442; PID:g180444
                                                                                                                                                                                                                                                                                                                                                                                               ##status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ##molecule_type DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ##status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   258 IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             67 IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SLPSPSRLPGPSDTPILPQ 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        un 40.5%;
Similarity 100.0%;
139; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Policastro, P.; Ovitt, C.E.; Hoshina, M.; Fukuoka, H.; Boothby, M.R.; Bolme, I.
J. Biol. Chem. (1983) 258:11492-11499
The beta subunit of human chorionic gonadotropin is encoded
                                                                                                                                                                                                                                                                                                                                                                                                                      I55224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A93230; 169972; 155224; 155250; 170007; 170008; A92303; A92181; A92142; PC1016; A61097; B56873; A01502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #superfamily pituitary glycoprotein hormone beta chain
#length 145  #checksum 2358
  I70007
                                                                                                                                                                                                                                                                      155250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       169972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   I55224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A93230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #formal_name Homo sapiens #common_name man
23-Oct-1981 #sequence_revision 23-Oct-1981 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            choriogonadotropin beta chain precursor - humanALTERNATE_NAMES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KTHUB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20-Mar-1998
                       CG-beta-3 gene
                                                                                                                                                                                                                                                                                             clone CG-beta-a
                                                                                                                                                                                                                                                                                                                                                                                          translated from GB/EMBL/DDBJ
                                                                                                                   preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ranslated from GB/EMBL/DDB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 1030; DB 2;
Pred. No. 1.88e-189;
                                           NID:g180419; PID:g463088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                      from
                                                                                                                      GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                            ດ
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
```

Boime,

```
REFERENCE
#authors
                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FERENCE A92181

fauthors Morgan, F.J.; Birken, S.; Canfield, R.E.

#journal J. Biol. Chem. (1975) 250:5247-5258

The amino acid sequence of human chorionic

#cross-references MUID:75211304
                                                                                                          #journal
#title
                                                                                                                                                                                                                                                                                                                        #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  **PRENCE A92303

**authors Birken, S.; Fetherston, J.; Canfield, R.; Boime, I.

**Journal J. Bil. 256:1816-1823

The amino acid sequences of the prepeptides contained **title alpha and beta subunits of human choriogonadotropin.

**toross-references MUID:81117268
#cross-references MUID:93229246
#accession B56873
#accession B56873
#accession B56873
#amolecule_type protein
26.28,'X',30-32,'X',34-42,'X',44-45,'X',47-48;75-76,'X'
##residues 78-91,'G',93-102 ##label KAR
                                                                                                                                                                                                                                                                                     #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ERENCE A92142

Fauthors Carlsen, R.B.; Bahl, O.P.; Swaminathan, #J. Biol. Chem. (1973) 248:6810-6827

#cross-references MUID:74011267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #accession
                                                                                                                                                                                                                                                                                                                                                                                               #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #accession
                                                                                                                                             #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ##molecule_type protein
##residues 21-22,'Q',24-73,'ZL',76-140,142-157,'PB',160-165,'SLP'
##label CAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ##molecule_type protein
##residues 1-20 ##label BIR
##note the identity of the residue
##note determined
                                                                                                                                                                                                                                                                                                                                                                                                                               ##note
                                                                                                                                                                                                                                                                                                                                                                                                                                        ##molecule_type protein
##molecule_type protein
##roaddies 21-165 ##label SHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ##molecule_type protein
##residues 21-165 ##label MOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rectacus preliminary; translated from GB/EMBL/DDBJ##molecule_type DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             """ translated from GB/EMBL/DDBJ
##molecule_type DNA
##rasid....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ##residues 1-5 ##label RE5 ##cross-references GB:M13503; NID:g180432;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ##residues
                                                                                                                                                                                                                                                                  ##molecule_type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ##note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ##note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chinese Biochem. J. (1990) 6:558-562
The immunological characteristics of the enzymatic fragments of human chorionic gonadotropin beta-subunit.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A92142
                                                                                                 A56873

Kardana, A.; Bagshawe, K.D.; Coles, B.;
Br. J. Cancer (1993) 67:686-692

Characterisation of UGP and its relation
                                                                                                                                                                                                                                                                                                  Endocrinology (1988) 123:572-583
Structure of the human chorionic gonadotropin beta-subunit fragment from pregnancy urine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A92181
                                                                                                                                                                                                                                                                                       A61097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PC1016
Shi, Z.P.; Du, G.G.; Li, W.X.; Liu, X.J.; Li,
                                                                                                                                                                                                                                                                                                                                                                      Birken, S.; Armstrong, E.G.; Kolks, M.A.G.; Cole, L.A.; Agosto, G.M.; Krichevsky, A.; Vaitukaitis, J.L.; Canf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PC1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A92303
                                                                                                                                                                                                                                                                                                                                                                                                              A6109
                                                                                           Iragment
                                                                                                                                                                            protein 26-32, 'X', 34-49, 'X', 51-60;75-112 ##label BI2 this material from pregancy urine lacks static acid in its carbohydrate and has been processed further from the mature form into two chains linked by disulfide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CG-beta-6 gene
                                                                                                                                                                                                                                                                                                                                                                                                                           article in Chinese with English abstract
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CG-beta-7 gene
                                                                                                        its relationship
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PID:g463089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PID: 9463090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              position
                                                                                                                                         Read, D.; Taylor, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gonadotropin.
                                                                                                        with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S.Z.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                could
                                                                                                        beta-core
                                                                                                                                                                                                                                                                                                                                                                           Canfield,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Xu,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'n
                                                                                                                                                                                                               from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                àq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
FEATURE
                                                                                                                                                                                                             ACCESSIONS
REFERENCE
                                                                                                                                                                                                                                                                 TITLE
DATE
                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                        ENTRY
                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #journal
#title
                                                                                                                                                                          #authors
                                                     #accession
                                                                                                                         #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              141,147,152,158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 138,150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21-165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #contents
                                                                                                                                                            #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #authors
                                                                                                                                                                                                                                                                                                                                                                                          318
                                                                                                                                                                                                                                                                                                                                                                                                                             147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27
```

```
29-77,43-92,46-130,
54-108,58-110,
113-120 #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ##cross-references GDB:119055; OMIM:118860
#map_position 19q13.3-19q13.3
#introns 5/3; 61/3
                                                                                                                                                ##residues 1-461 ##label
##cross-references GB:U19994;
                                  ##molecule_type protein
##residues 1-7 ##label SU2
##experimental_source kidney cell line 15
                                                                                                                                                                                                                                          ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ##experimental_source urine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SLPSPSRLPGPSDTPILPQ 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SLPSPSRLPGPSDTPILPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               40.5%;
Similarity 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the circum; (or pseudogenes) (or pseudogenes) **
**superfamily pituitary glycoprotein **
**superfamily pituitary flycoprotein **
**superfamily pituitary flycoprotein **
**superfamily pituitary flycoprotein flycopr
                                                                                                                                                                                                                                                                                        JC4302
                                                                                                                                                                                                                                                                                                                                                    Suter, B.; Paul1, U.
Gene (1995) 163:263-266
Cloning of the cDNA encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tumor necrosis factor receptor 29-Nov-1995 #sequence_revision 12-Dec-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              predicted\
    *binding_site carbohydrate (Ser) (covalent) *status
    experimental
    *length 165    *molecular-weight 17739    *checksum 6523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nature (1994) 369:455-461 Crystal structure of human chorionic gonadotropin. annotation; X-ray crystallography, 3.0 angstroms; of disulfide bonds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lapthorn, A.J.; Harris, D.C.; Littlejohn, A.;
J.W.; Canfield, R.E.; Machin, K.J.; Morgan,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the choriogonadotropin beta chain locus contains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JC4302; PC4093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JC4302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GDB:CGB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                               factor receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence modified after extraction this material was designated urinar peptide (peak 2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #disulfide_bonds #status experimental\
#binding_site_carbohydrate (Asn) (cova
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #domain signal sequence #status experimental #label SIG\
#product choriogonadotropin beta chain #status
experimental #label MAT\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #binding_site carbohydrate (Ser) (covalent)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       experimental/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 1030; DB 1;
Pred. No. 1.88e-189;
0; Mismatches 0;
                                                                                                                                                    SUT
NID:g1141752;
                                                                                                                                                                                                                                                                                                                                                                     the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   p55 - pigORGANISM
08-Feb-1996 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Asn) (covalent)
                                                                                                                                                                 PID: g1141753
                                                                                                                                                                                                                                                                                                                                                                     porcine p55 tumor necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   urinary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 165;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              normone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             from NCBI backbone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gonadotrophin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lustbader,
F.J.; Isaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               six genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        correction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #formal_nam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
ACCESSIONS
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENETICS
                                                         Ş
                                                                                                 ₽
                                                                                                                                      å
                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                      멎
                                                                                                                                                                                                                                                                                                   SUMMARY
                                                                                                                                                                                                                                                                                                                      CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                             GENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44-82
211-231
361-447
                                                                                                                                                                                                                                                                                                                                                                                                                                                    #authors Talmadge, K.; Vamvakopoulos, N.C.; Fiddes, J.C.
#Journal Nature (1984) 307:37-40
#title Evolution of the genes for the beta subunits of human chorionic gonadotropin and luteinizing hormone.
#cross-references MUID:84093590
#accession 137231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1-29
30-461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     54,145,151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44-194
                                                                                                                                                                                                                                                                                                                                             #introns
                                                                                                                                                                                                                                                                                                                                                                                                         ##molecule_type DNA
##resian--
                      127
                                                              258
                                                                                                                                          198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143 KONTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                                                                                                                                       ##residues
                                                                                                                                                                                                                                                                                                                                                                                ##cross-references EMBL:X00266; NID:g29907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83
                                                                                                   67
                                                                                                                                                                                                                                       Match 40.3%;
Local Similarity 99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41 ESLCPQGKYSHPQNRSICCTKCHKGTYLHNDCLGPGLDTDCRECDNGTFTASENHLTQCL 100
                                                                                                                                                                               7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10
                                                         PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRYLQGVLFALPQVVCNYRDVRFES 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KQDTICNCHSGFFLRDKECVSCVNCKNA-DCKNLCPATSETRNDFQDTGTT 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SLPSPSRLPGPSDTPILPQ 145
                                                                                                                                        PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SCSKCRSEMSQVEISPCTVDRDTVCGCRKNQYRKYWSETLFQCLNCSLCPNGTVQLPCLE 160
                                                                                                   IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQASSSSKAPPP 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40.5%;
1 Similarity 73.1%;
125; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #superfamily tumor necrosis factor receptor type 1; NGF
    receptor repeat homology
glycoprotein; kidney; receptor; transmembrane protein; tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tnfr
                                                                                                                                                                                                                                                                                                 #superfamily pituitary glycoprotein hormone beta chain
#length 145 #checksum 2349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          beta-gonadotropin - human (fragment)ORGANISM #fc
21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        137231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #length 461 #molecular-weight 50696 #checksum 8079
                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-May-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #binding_site carbohydrate (Asn) (covalent) #status
                                                                                                                                                                                                                                                                                                                                                                                                     1-145 ##label RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #domain signal sequence #status predicted #label SIG\
#product tumor necrosis factor receptor p55 #status
predicted #label MAT\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    domain extracellular cysteine rich #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        domain signal transduction #status predicted #label
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #label EXT\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #type fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            transmembrane #status predicted #label
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NGF receptor repeat homology #label NG1\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1028; DB 2;
Pred. No. 5.08e-189;
24; Mismatches 21;
                                                                                                                                                                                                                                       Score 1024; DB 2;
Pred. No. 3.70e-188;
                                                                                                                                                                                                                     0
                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                          from
                                                                                                                                                                                                                                                                                                                                                                                                                                          GB/EMBL/DDBC
                                                                                                                                                                                                                                                          Length 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1;
                                                                                                                                                                                                                     0
                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #formal_name Homo
                                                                                                                                                                                                                     0;
  FEATURE
1-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSIONS
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                CLASSIFICATION
                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #journal #title
                                                                                                                                                                                                                                                                                               #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #authors Goodwin, R.G.; Anderson, D.; Jerzy, R.; Davis, T.; Brannar C.I.; Copeland, N.G.; Jenkins, N.A.; Smith, C.A.

#journal Mol. Cell. Biol. (1991) 11:3020-3026

#title Molecular cloning and expression of the type 1 and type 2

#cross-references MUID:91246168

#accession B40254
                                                                                                                                                                                                                                       #journal Immunogenetics (1994) 39:450-451
#title Nucleotide sequence of the TNF t;
endothelioma cell line.
#cross-references MUID:94245292
                                                                                                                                                                                                                                                                                                                                                                                                                     #cross-references MUID:92039815
#accession S19021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        p55 tumor necrosis factor receptor.
#cross-references MUID:91285014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #cross-references MUID:91187885
#accession A38634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #authors
                                                                                                                                                                                                                     #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          **residues 1-454 **label GO2

**TOSS-references GB:M60468; NID:g199825; PID:g199826

ENCE S16677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      318
                                                       ##residues 1-454 ##label RES
##cross-references GB:L26349; NID:9430732; PID:9430733
#This protein is one of two distantly related receptors
This protein is one of two distantly related receptors
TNF-alpha (cachectin) and TNF-beta (lymphotoxin).
FICATION #superfamily tumor necrosis factor receptor type
receptor repeat homology
                                                                                                                                                                                                                                                                                                                                                         ##molecule_type mRNA
#residues 1-454 ##label ROT
##cross-references EMBL:X57796; NID:g54848; PID:g54849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ##residues 1-454 ##label LEW
##cross-references GB:M60468; NID:g199825; PID:g199826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ##molecule_type mRNA
                                                                                                                                                                         ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SLPSPSRLPGPSDTPILPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Barrett, K.; Taylor-Fishwick, D.A.; Cope, A.P.; Kissonerghis A.M.; Gray, P.W.; Feldmann, M.; Foxwell, B.M.J. Eur. J. Immunol. (1991) 21:1649-1656
Cloning, expression and cross-linking analysis of the murine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lewis, M.; Tartaglia, L.A.; Lee, A.; Bennett, G.L.; Rice, G.C.; Wong, G.H.W.; Chen, E.Y.; Goeddel, D.V. Proc. Natl. Acad. Sci. U.S.A. (1991) 88:2830-2834 Cloning and expression of cDNAs for two distinct murine tumor necrosis factor receptors demonstrate one receptor is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tumor necrosis factor receptor type 1 precursor - mouseALTERNATE_NAM #formal_name Mus musculus #common_name house mouse 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 05-Sep-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Immunogenetics (1991) 34:338-340 Molecular cloning and expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A38634; B40254; S16677; S19021; I54532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S16677
                                         duplication;
                                                                                                                                                                                                                     I54532
                                                                                                                                                                                                                                                                                                                        Bebo, B.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rothe, J.G.; Brockhaus, M.; Gentz, R.; Lesslauer, W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A40254
                                                                                                                                                                                                                                                                                                                                           [54532
                                                                                                                                                                                                                                                                                                                                                                                                                                                            type b.
                                                                                                                                                                                                  translated from GB/EMBL/DDBJ
  #domain signal sequence #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #type complete
                                         glycoprotein; receptor; transmembrane protein
                                                                                                                                                                                                                                                                               type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 얁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the
                                                                                                                                                                                                                                                                               I receptor
    predicted #label SIG\
```

mouse

Inf receptor

for

Davis, 1.

T.; Brannan

Kissonerghis,

, פי יי:

```
GENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           84-126
127-167
168-204
213-235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #gene
#introns
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  236-454
54,151,202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-212
44-82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Steinmetz, M.

#journal Mol. Immunol. (1993) 30:165-176

#title Genomic organization and promoter function
tumor necrosis factor receptor beta gene.
#cross-references MUID:93156721
#accession 157826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-454
                                                                                                                                                                                                                              101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           **status preliminary; translated from GB/EMBL/DDBJ
*#molecule_type DNA

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              161 TONTYCNCHAGFFLRESECVPCSHCKKNEECMKLCLPPPLANYTNPQDSGTA 212
                                                                                                       161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ##residues 1-454 ##label RES
##cross-references GB:M76656; NID:g202100; PID:g202102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101
                                                                                                                                                                  83
                                                                                                                                                                                                                                                                                                                  41 DSLCPQGKYVHSKNNSICCTKCHKGTYLVSDCPSPGRDTVCRECEKGTFTASQNYLRQCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity 68.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                / Match 37.8%;
Local Similarity 68.6%;
les 118; Conservative
                                                                                                                                                                                                                                                                                         23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12
                                                                    TQNTVCNCHAGFFLRESECVPCSHCKKNEECMKLCLPPPLANVTNPQDSGTA 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DSLCPQGKYVHSKNNSICCTKCHKGTYLVSDCPSPGRDTVCRECEKGTFTASQNYLRQCL 100
                                        KONTYCTCHAGFFLRENECYSCSNCKKSLECTKLCLPQ-IENVKGTEDSGTT 193
                                                                                                                                                                                           SCKTCRKEMSQVEISPCQADKDTVCGCKENQFQRYLSETHFQCVDCSPCFNGTVTIPCKE 160
                                                                                                                                                                                                                                                                                DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KONTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQ-IENVKGTEDSGTT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SCKTCRKEMSQVEISPCQADKDTVCGCKENQFQRYLSETHFQCVDCSPCFNGTVTIPCKE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL 82
                                                                                                                                                         SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE 142
                                                                                                                                                                                                                                                                                                                                                                                                                118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cytokine receptor #length 454 #molecular-weight 50030 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13/3; 65/1; 108/1; 158/1; 184/2; 210/1; 248/1; 257/3; *superfamily tumor necrosis factor receptor type 1; NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-May-1997
I57826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tumor necrosis factor receptor - mouseORGANISM (02-Aug-1996 *sequence_revision 02-Aug-1996 *text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rothe, J.G.; Bluethmann, H.; Gentz,
                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      receptor repeat homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #domain extracellular *status predicted *label EXT\
#domain NGF receptor repeat homology *label NG1\
#domain NGF receptor repeat homology *label NG2\
#domain NGF receptor repeat homology *label NG3\
#domain NGF receptor repeat homology *label NG4\
#domain NGF receptor repeat homology *label NG4\
#domain transmembrane *status predicted *label NEM\
#domain intracellular *status predicted *label INT\
#binding_site carbohydrate (Asn) (covalent) *status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                product tumor necrosis factor receptor type 1 #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          predicted #label MAT\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #molecular-weight 50129 #checksum 4839
                                                                                                                                                                                                                                                                                                                                                                                                Score 960; DB 2; Length 454
Pred. No. 2.26e-174;
27; Mismatches 26; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 960; DB 1; Le
Pred. No. 2.26e-174;
27; Mismatches 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 454;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 454;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lesslauer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of the
                                                                                                                                                                                                                                                                                                                                                                                                       1:
                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Σ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *formal_name Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
FEATURE
1-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSIONS
REFERENCE
#authors
                                                                                          ACCESSIONS
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DATE
                                                                                                                                                                                                                                                                                                               ENTRY
                                                                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfizenmaier, K.; Lantz, M.; Olsson, I.; Hauptmann, R.
Stratowa, C.; Adolf, G.R.

#journal DNA Cell Biol. (1990) 9:705-715
#title Molecular cloning and expression of human and rat tumor necrosis factor receptor chain (p60) and its soluble derivative, tumor necrosis factor-binding protein.
#accession B36555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              44-82
84-126
127-167
168-204
212-234
235-461
54,151,201
   #authors
#journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ##residues 1.461 ##label HIK
##cross-references GB:M63122; NID:g207361; PID:g207362
##cross-references GB:M63122; NID:g207361; PID:g207362
NT This protein is one of two known receptors for both TNF-alpha
(Cachectin) and TNF-beta (lymphotoxin).

(Cachectin) and TNF-beta (lymphotoxin).

(FICATION #superfamily tumor necrosis factor receptor type 1; NGF
receptor repeat homology
                                                                                                                                                                                                                                                                                                                                                                                                                                143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     161 KONTYCHCAGFFLSGNECTPCSHCKKNQECMKLCLPPVANYTNPQDSGTA 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41 DNLCPQGKYAHPKNNSICCTKCHKGTYLVSDCPSPGQETVCEVCDKGTFTASQNHVRQCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Match 37.2%;
Local Similarity 67.3%;
es 115; Conservative
                                                                                                                                                                                                                                                                                                                                        14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SCKTCRKEMFQVEISPCKADMDTVCGCKKNQFQRYLSETHFQCVDCSPCFNGTVTIPCKE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                KONTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
   Crawford, R.J.; Tregear, Gene (1986) 46:161-169
The nucleotide sequences
                                                                                                                                               #common_name olive baboon
31-Mar-1988 #sequence_revision
03-May-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tumor necrosis factor receptor type 1 precursor - ratCONTAINS #formal_name Rattus norvegicus #common_name Norway rat 30-un-1992 #sequence_revision 07-Oct-1994 #text_change 05-Sep-1997
                                                                                                                                                                                                                                          choriogonadotropin beta chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    duplication; glycoprotein; receptor; transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *product tumor necrosis factor binding protein *stat
predicted *label TBP\
*domain NGF receptor repeat homology *label NG1\
*domain NGF receptor repeat homology *label NG2\
*domain NGF receptor repeat homology *label NG3\
*domain NGF receptor repeat homology *label NG3\
*domain NGF receptor repeat homology *label NG4\
*domain NGF receptor repeat homology *label NG4\
*domain transmembrane *status predicted *label NEM\
*domain intracellular *status predicted *label NTI\
*domain intracellular *status predicted *label NTI\
*domain intracellular *status predicted *label NTI\
*domain *status predicted *status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #domain extracellular #status predicted #label EXT\
#product tumor necrosis factor binding protein #sta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #binding_site carbohydrate (Asn) (covalent) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *product tumor necrosis factor receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #domain signal sequence #status predicted #label SIG\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 predicted #label MAT\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        461
                                                                                                                                                                                                                                                                                                         #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #molecular-weight 50969 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 944; DB 1; L. Pred. No. 6.21e-171; 25; Mismatches 31:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complete
                                                           G.W.; Niall,
of baboon chorionic gonadotropin
                                                                                                                                                                                                                                             precursor - olive baboonORGANISM
                                                                                                                                                                                  31-Mar-1988 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                              H.D
```

type 1 #status

#status

0

Gaps

0

82

1617

RESULT

TITLE

á 밁 Š 밁 Ş 밁

SUMMARY

Ş 밁 Š 용 Š 밁

SUMMARY

```
COMMENT
COMMENT
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE
1-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #submission submitted to 
#cross-references PDB:1XUL 
REFERENCE TN032625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                          REFERENCE
#authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 33.7%; Score 857; DB 1; Length 165; Best Local Similarity 81.3%; Pred. No. 2.82e-152; Matches 113; Conservative 14; Mismatches 12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-77,43-92,46-130,
54-108,58-110,
113-120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #accession A25808
##molecule_type mRNA
                                                                                                                                                                                                                                                     #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                           #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            140,147,152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             beta-subunit genes have diverged from the human. #cross-references_MUID:87106851
                         97-101,26-39,9-17
54-59,86-91
61-67,78-84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 147 SPPSPSRLLEPAGTPFLPQ 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ##residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       198 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               87 IRLPGCPPGVDPMVSVPVALSCRCALCRRSTSDCGGPKDHPLTCDDPNLQASSSSKDPPP 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PLCRPINATLAAEKEACPVCVTVNTTICAGYCPTMMRVLQAVLPPVPQVVCNYREVRFES 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SLPSPSRLPGPSDTPILPQ 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sidues 1-165 **label CRA
There are at least five copies of CG-related genes and at least two
of these are expressed in the baboon placenta.
TION **superfamily pituitary glycoprotein hormone beta chain
glycoprotein; hormone; placenta; pregnancy maintenance
                                                                                                                     Hendrickson, W.A.

Structure (London) (1994) 2:545

Structure of human chorionic gonadotropin at 2.6 a resolution from mad analysis of the selenomethionyl protein.

Resolution: not applicable

Determination: theoretical model

complex; glycoprotein hormone receptor glycoprotein; hormone; phosphorylation; receptor
                                                                                                                                                                                                                                                                                                                                                                     Jiang, X.; Dreano, M.; Buckler, D.R.; Cheng, S.; Ythi
Wu, H.; Hendrickson, W.A.; El Tayar, N.
Structure (London) (1996) 3:1341
Structural predictions for the ligand-binding region
glycoprotein hormone receptors and the nature of
hormone-receptor interactions structure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Jiang, X.; Dreano, M.; Buckler, D.R.; Cheng, S.; Ythier, A.; Wu, H.; Hendrickson, W.A.; El Tayar, N. submitted to the Brookhaven Protein Data Bank, December 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   chorionic gonadotropin, chain B - humanPDB_TITLE
   receptor complexed with human chorionic gonadotropin
   formal_name Homo sapiens #common_name man
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      predicted
#length 165 #molecular-weight 17592 #checksum 4960
                                                                                                                                                                                                                                                                                                                                              TN032626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A66957
#region beta sheet\
#region beta sheet\
#region beta sheet\
#disulfide_bonds\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #disulfide_bonds #status predicted\
#binding_site carbohydrate (Asn) (covalent) #status
predicted\
#binding_site carbohydrate (Ser) (covalent) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #domain signal sequence #status predicted #label SIG\
#product choriogonadotropin beta chain #status predicted
#label CGB\
                                                                                                                                                                                                                                                                                                                       Lustbader, J.W.; Liu, Y.; Canfield, R.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S.; Ythier,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        theoretical mod
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

(1) (1)

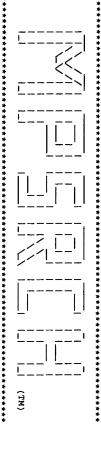
Š

밁 Ş 밁

ş В

```
δõ
                                                                                                                                                                           밁
Search completed: Wed May Job time : 56 secs.
                                                                    Š
                                                                                                      밁
                                                                                                                                                                                                                                                                              SUMMARY
                                                                                                                                                                                                         Query Match 31.6%;
Best Local Similarity 100.0%;
Matches 105; Conservative
                                                                                                                                                                                                                                                                                              25-109
33-87
37-89
92-99
                                                                      258
                                                                                                                                        198 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 257
                                                                                        66 IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCD 110
                                                                                                                                                          6 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 65
                                                                    IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCD 302
                                                                                                                                                                                                                                                                            #disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds\
#disulfide_bonds
#disulfide_bonds
#length 110 #molecular-weight 11906 #checksum
                  6 09:06:41 1998
                                                                                                                                                                                                       Score 803; DB 5; L
Pred. No. 9.67e-141;
0; Mismatches 0;
                                                                                                                                                                                                                                             Length 110
                                                                                                                                                                                                             Indels
                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                6414
                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                             0
```

THIS PAGE BLANK (USPTO)



Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm Run on: Wed May 6 09:03:29 1998; MasPar time 9.80 Seconds 859.610 Million cell updates/sec

Tabular output not generated.

Title: >US-08-804-166-8
Description: (1-336) from US08804166.pep
Perfect Score: 2541

Perfect Score: 2541
Sequence: 1 SRTSLLLAFGLLCLPWLQEG......PSLPSPSRLPGPSDTPILPQ 336

Scoring table: PAM 150 Gap 11

arched: 69112 seqs, 25083644 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database: swiss-prot35

Statistics: Mean 44.259; Variance 72.852; scale 0.608

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

æ

23	22	20	19	18	17	16	15	14	13	12	11	10	Q	8	7	σ	s	4	w	2	1	NO.
416	426	427	430	542	585	587	595	597	598	602	613	614	630	709	740	857	944	960	1028	1030	1322	Score
16.4	16.8	16.8						23.5		23.7	24.1	24.2		27.9	29.1	33.7	37.2	37.8	40.5	40.5	52.0	Query Match
138	146	141	144	105	118	138	118	141	141	141	169	141	169	164	141	165	461	454	461	165	455	Length
1	. р	_	<b></b>	_	_	-	_	۳	Ь	-	۳	Н	_	۳	۳,	Н	Н	ب	μ.	هـــو	ᆫ	88
GTHB_CLAGA	GTHB_CTEID	GTHB_HYPMO	GTHB_CYPCA	LSHB_MOUSE	LSHB_PHYCA	LSHB_CANFA	LSHB_BALAC	LSHB_RAT	LSHB_PIG	LSHB_SHEEP	LSHB_HORSE	LSHB_BOVIN	LSHB_EQUAS	CGHB_CALJA	LSHB_HUMAN	CGHB_PAPAN	TNR1_RAT	INR1_MOUSE	INR1_PIG	CGHB_HUMAN	TNR1_HUMAN	ID
GONADOTROPIN BETA-II C GONADOTROPIN BETA CHAI		GONADOTROPIN BETA CHAI	GONADOTROPIN BETA CHAI	LUTROPIN BETA CHAIN PR	LUTROPIN BETA CHAIN (L	LUTROPIN BETA CHAIN PR	LUTROPIN BETA CHAIN (L		LUTROPIN BETA CHAIN PR	LUTROPIN BETA CHAIN PR	LUTROPIN/CHORIOGONADOT	LUTROPIN BETA CHAIN PR	LUTROPIN/CHORIOGONADOT	CHORIOGONADOTROPIN BET	LUTROPIN BETA CHAIN PR	CHORIOGONADOTROPIN BET	TUMOR NECROSIS FACTOR	TUMOR NECROSIS FACTOR	TUMOR NECROSIS FACTOR	CHORIOGONADOTROPIN BET	TUMOR NECROSIS FACTOR	Description
7.52e-70 1.16e-68	3.23e-72	1.87e-72	3.62e-73	4.00e-100	1.29e-110	4.19e-111	4.61e-113		8.48e-114	8.87e-115		1.01e-117	1.18e-121	3.56e-141	7.12e-149	4.26e-178	5.76e-200	5.34e-204	! n	1.12e-221	6.45e-296	Pred. No.

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24
281	289	297	303	306	305	308	309	309	310	320	319	352	355	366	371	388	398	403	405	407	411
11.1	11.4	11.7	11.9	12.0	12.0	12.1	12.2	12.2	12.2	12.6	12.6	13.9		14.4	14.6		15.7	15.9	15.9	16.0	16.2
129	129	118	130	138	130	138	138	138	138	138	136	159	115	166	128	142	142	140	112	113	142
_	ب	1	_	٢	بر	Ь	щ	سر	ш	ب	Н	دسو	<b> </b>	μ	ш	Н	_	H	<b>_</b>	۲	Н
FSHB_HUMAN	FSHB_SHEEP	FSHB_HORSE	FSHB_RAT	ISHB_MOUSE	FSHB_MOUSE	TSHB_HUMAN	TSHB_BOVIN	TSHB_RAT	TSHB_PIG	TSHB_CANFA	GTH2_FUNHE	LSHB_MELGA	GTH2_THUOB	LSHB_COTJA	LSHB_STRCA	GTH2_CORAU	GTHB_ONCTS	GTH2_ANGAN	LSHB_RANCA	GTHB_MURCI	GTH2_ONCMA
FOLLITROPIN BETA CHAIN	FOLLITROPIN BETA CHAIN	FOLLITROPIN BETA CHAIN	FOLLITROPIN BETA CHAIN	THYROTROPIN BETA CHAIN	FOLLITROPIN BETA CHAIN	THYROTROPIN BETA CHAIN	GONADOTROPIN BETA-II C	LUTROPIN BETA CHAIN PR	GONADOTROPIN BETA-II C	LUTROPIN BETA CHAIN PR	LUTROPIN BETA CHAIN (L	GONADOTROPIN BETA-II C	GONADOTROPIN BETA CHAI	GONADOTROPIN BETA-II C	LUTROPIN BETA CHAIN (L	GONADOTROPIN BETA CHAI	GONADOTROPIN BETA-II C				
1.30e-38	2.07e-40	3.24e-42	1.42e-43	2.95e-44	4.98e-44	1.03e-44	6.13e-45	6.13e-45	3.63e-45	1.89e-47	3.20e-47	7.92e-55	1.59e-55	4.38e-58	2.98e-59	3.09e-63	1.37e-65	9.05e-67	3.05e-67	1.03e-67	1.16e-68

# ALIGNMENTS

```
THE SOLL THE RESERVE AND THE R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
MEDLINE; 90235284.
LOETSCHER H., PAN Y.-C.E., L
TABUCHI H., LESSLAUER W.;
CELL 61:351-359(1990).
                                                                                                                          SEQUENCE FROM N.A.
TISSUE-PLACENTA;
MEDLINE; 91017509.
GRAY P.W., BARRETT K., (
PROC. NATL. ACAD. SCI. U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TINI_HUMAN STANDARD; PRT; 455 AA.

### 19438;

01-FEB-1991 (REL. 17, CREATED)

01-FEB-1991 (REL. 17, LAST SEQUENCE UPDATE)

01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)

TUMOR NECROSIS FACTOR RECEPTOR 1 PRECURSOR (TUMOR NECROSIS FACTOR BINDING PROTEIN 1) (TBPI) (P60) (TNF-R1) (P55) (CD120A).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A., AND SEQUENCE OF 4 MEDILINE; 91006021.
NOPHAR Y., KEMPER O., BRAKEBUSCH C., ADERKA D., HOLLMANN H., WALLACH D.; EMBO J. 9:3269-3278(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE; 90235285.
SCHALL T.J., LEWIS M., KOLL
GETANAGA T., GRANGER G.A.,
CELL 61:361-370(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TNFR1 OR TNFAR
                                                                                                                                                                                                                                                                                                MEDLINE; 91090841.
HIMMLER A., MAURER-FOGY I., KROENKE M., SCHEURICH P., PFIZENMAIER K.,
LANTZ M., OLSSON I., HAUPTMANN R., STRATOWA C., ADOLF G.R.;
DNA CELL BIOL. 9:705-715(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
TISSUE-PLACENTA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HOMO SAPIENS (HUMAN) EUKARYOTA; METAZOA;
   FUCHS P.,
                              SEQUENCE FROM N.A. MEDLINE; 92250049.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EUTHERIA; PRIMATES
                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. MEDLINE; 91090841.
   STREHL
   ა
,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
   DWORZAK M., HIMMLER A., AMBROS P.F.;
                                                                                                                                CHANTRY
U.S.A. 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KOLLER K.J., LEE A., RICE G.C., WONG G.H.W.,
.A., LENTZ R., RAAB H., KOHR W.J., GOEDDEL D.V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LAHM H.-W., GENTZ R.,
                                                                                                                                87:7380-7384(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41-53; 110-124 AND 199-201.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENGELMANN H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BROCKHAUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZWANG R.,
```

```
RX MEDLINE; 97094982.

RA MAISMITH J.H., DEVINE T.Q., KHONO H., SPRANG S.R.;

RA NAISMITH J.H., DEVINE T.Q., KHONO H., SPRANG S.R.;

RA STRUCTURE 4:1251-1262(1996).

CC 1- FUNCTION: RECEPTOR FOR THE ALDAPTOR MOLECULE FADD

CC RECRUITS CASPASE-8 TO THE ACTIVATED RECEPTOR. THE RESULTING

CC RECRUITS CASPASE-8 TO THE ACTIVATED RECEPTOR. THE RESULTING

CC PERFORMS CASPASE-8 PROTEDLYTIC ACTIVATION WHICH INTITIZES THE

CC PETCORNES CASPASE-8 PROTEDLYTIC ACTIVATION WHICH INTITIZES THE

CC POSTERIES THE DIABLE OF CASPASES (ASPARTATE-SPECIFIC CYSTEINE

CC PROTENSES) MEDIATION. ONCE AGGREGATED THE RECEPTORS DEATH DOMAIN OF THE EXTRACELLULAR DOMAIN OF THE THE DEATH DOMAIN OF THE PROTEINS DEATH DOMAINS

CC PROVIDE A NOVEL MOLECULAR INTERPACE THAT INTERACTS SPECIFICALLY

CC PROTEINS SUCH AS TRAFS, RIP AND POSSIBLY FADD. THIS COMPLEX

CC PROTEINS SUCH AS TRAFS, RIP AND POSSIBLY FADD. THIS COMPLEX

CC ACTIVATES AT LEAST TWO DISTINCT SIGNALING CASCADDES, APOPTOSIS AND

CC I-- SUBCELULAR LOCATION: TYPE I MEMBRANE PROTEIN.

CC I-- SUBLILARITY: CONTAINS A LA-NGFR/TNFR-TYPE CYSTEINE-RICH REGION.

DR EMBL; M5866; G339756; --

DR EMBL; M5866; G339750; --

DR EMBL; M75866; G339750; --

DR EMBL; M75866; G339750; --

DR EMBL; M75866; G339750; --

DR EMBL; M75867; G339760; --

DR EMBL; M5867; G339760; --

DR EMBL; M5867; G339760; --

DR EMBL; M5867; S339760; --

DR EMBL; M5867; S339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENOMICS 13:219-224
[7]
SEQUENCE OF 41-45.
MEDILINE: 90110215.
ENGELMANN H., NOVICE
         REPEAT
REPEAT
REPEAT
DOMAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                       TRANSMEM
DOMAIN
DOMAIN
REPEAT
REPEAT
                                                                                                                                                             CHAIN
DOMAIN
                                                                                                                                                                                                                             PROSITE;
PROSITE;
PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE; 93258809.
BANNER D.W., D'ARCY A., GBROGER C., LOETSCHER H.,
                                                                                                                                                                                   CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CELL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      X-RAY CRYSTALLOGRAPHY (1.85 ANGSTROMS) OF 41-202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      X-RAY CRYSTALLOGRAPHY (2.85 ANGSTROMS) OF
                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                        RECEPTOR; TRA
3D-STRUCTURE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BIOL.
                                                                                                                                                                                                                                                                                                       A38208;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            73:431-445(1993).
                                                                                                                                                                                                                PS00652; TNFR_NGFR_1; 3.
PS50050; TNFR_NGFR_2; 3.
PS50017; DEATH_DOMAIN; 1.
; TRANSMEMBRANE; GLYCOPROT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90110215.
N H., NOVICK D., WALLACH D.;
CHEM. 265:1531-1536(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13:219-224(1992).
          A38208
          JANES W., GENT, LESSLAUER W.;
                                                                                                                                                                                                                  GLYCOPROTEIN;
                                                                                  CYTOPLASMIC (POTENTIAL).
4 X THER-CYS.
THER-CYS 1.
THER-CYS 2.
THER-CYS 3.
THER-CYS 4.
                                                                                                                                                 TUMOR NECROSIS FACTOR RECEPTOR TUMOR NECROSIS FACTOR BINDING F EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENTZ R.,
                                                                                                                                                                                                                  REPEAT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-211.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SCHOENFELD
                                                                                                                                                                                                                  SIGNAL;
                                                                                                                                                                                                                 APOPTOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H.-J.,
                                                                                                                                                                        PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            011111111111111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 17
MEDLINE; 74011.
MEDLINE; 74011.
CARLSEN R.B., BA
                                                                                                                                                                                                                                                                                                                                                                                                  21-JUL-1986 (REL. 01
21-JUL-1986 (REL. 01
01-OCT-1996 (REL. 34
CHORIOGONADOTROPIN E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
CARBOHYD
CONFLICT
CONFLICT
                                                                                                                        SEQUENCE OF
MEDLINE; 81
BIRKEN S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                 BOIME
                                                                                                                                                                                                                                                           SEQUENCE FROM
MEDLINE; 8409:
                                                                                                                                                                                                                                                                                        MEDLINE; 81012134.
FIDDES J.C., GOODMAN H.M.
NATURE 286:684-687(1980).
                                                                                                                                                                                                                                                                                                                                            HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; C
EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                          SUBUNIT).
                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLINE; 84008141.
                                                                                                                                                                                                                                       NATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGHB_HUMAN
                            PRELIMINARY SEQUENCE MEDLINE; 74011267.
                                                                                                                                                                                          POLICASTRO P.,
                                                                                                                                                                                                                                                  TALMADGE
                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                     . BIOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83
                                                                                                                BIOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23
                                                                                                                                                                                                                                   NCE FROM N.A.
NE; 84093590.
DGE K., VAMVAKOPOULOS N
E 307:37-40(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ch 52.0%;
l Similarity 100.0%;
171; Conservative
                                                                                                                                   S OF 1-20.
81117268.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 127
146
149
168
182
185
145
145
145
145
                                                                                                                                                                                                                                                                                                                          N.A.
                                                                                                                                                                                            OVITI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð,
                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       143
158
166
179
191
195
195
145
145
446
446
50494
                                      ç
```

```
SEQUENCE OF 21-165.

MEDLINE; 75211304.

MORGAN F.J., BIRKEN S., CANFIELD R.E.;

J., BIOL. CHEM. 250:5247-5258(1975).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41 DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYMSENLFQCFNCSLCLNGTVHLSCQE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                            ., FETHERSTON J., CANFIELD R.E., CHEM. 256:1816-1823(1981).
                                                                                                                                                                                                                                           CHEM. 258:11492-11499(1983)
BAHL O.P., SWAMINATHAN N.;
. 248:6810-6827(1973).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01, CREATED)
01, LAST SEQUENCE UPDATE)
34, LAST ANNOTATION UPDATE)
N BETA CHAIN PRECURSOR (CHORIONIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                          C.E., HOSHINA M.,
                                               21-165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ž
                                                                                                                                                                                                                                                                                                                                                            z.c.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL.
POTENTIAL.
POTENTIAL.
MISSING (IN REF. 4).
GPAA -> APP (IN REF. 4
GPAA -> CEOEAOGF CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 1322; DB 1;
Pred. No. 6.45e-296;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                              FIDDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      165
                                                                                                                                                                                                                                                                             FUKUOKA
                                                                                                                                                                                                                                                                                                                                                            J.С.;
                                                                                                                                                                             BOIME I.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₹
                                                                                                                                                                                                                                                                           Η.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ٥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GONADOTROPHIN BETA
                                                                                                                                                                                                                                                                               BOOTHBY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   211
                                                                                                                                                                                                                                                                               z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

146 317

```
PROSITE; PS00261; GLYCO_HORMONE_BETA_1; 1.

DR PROSITE; PS00689; GLYCO_HORMONE_BETA_2; 1.

KW HORMONE; GLYCO_PROTEIN; SIGNAL; 3D-STRUCTURE.

FT SIGNAL 1 20
FT CHAIN 21 165 CHORIOGONADOTROPIN
FT DISULFID 29 77
DISULFID 43 92
TDISULFID 43 92
TDISULFID 44 130
DISULFID 54
DISULFID 54
DISULFID 54
DISULFID 54
DISULFID 54
                                                                                                                  S
                                       밁
                                                                                                                                                                                                                                                                                                                                                                     C LUTROPIN, FOLLITROPIN AND GONADOTROPIN,
C -!- TISSUE SPECIFICITY: PLACENTA.
C -!- DEVELOPMENTAL STAGE: MADE BY THE FIRST TRIMESTER PLACENTA.
FR EMBL; V00117; G180437; -.
FR EMBL; M13504; G463088; -.
FR EMBL; M13505; G463089; -.
FR EMBL; M13505; G463090; -.
FR EMBL; M13505; G463090; -.
FR EMBL; M13507; G463090; -.
FR EMBL; M13507; G180453; -.
FR EMBL; K03187; G180453; -.
FR EMBL; K03187; G180453; JOINED.
FR EMBL; K03188; G180453; JOINED.
FR PDB; 1HCN; 30-SEP-94.
FR PDB; 1HCN; 30-SEP-94.
FR PDB; 1HRP; 01-NOV-94.
                                                                           Query Match
Best Local :
                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              [7]
SEQUENCE OF 1-5 FROM N.A.
MEDLINE; 86195987.
POLICASTRO P.F., DANIELS-MCQUEEN S.,
J. BIOL. CHEM. 261:5907-5916(1986).
                                                                                                                VARIANT
SEQUENCE
                                                                                                                                                                                                     DISULFID
DISULFID
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LAPTHORN A.J., HARRIS D.C., LITTLEJOHN A., LUSTBADER J.W., CANFIELD R.E., MACHIN K.J., MORGAN F.J., ISAACS N.W.;
NATURE 369:455-461(1994).
-I- FUNCTION: STIMULATES THE OVARIES TO SYNTHESIZE THE STEROIDS THAT ARE ESSENTIAL FOR THE MAINTENANCE OF PREGNANCY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE; 92314469.
WEISSHAAR G., HIYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE; 90094415.
SACCUZO BEEBE J., MOUNTJOY K., KRZESICKI R.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MISE T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY ASSIGNMENT OF DISULFIDE BONDS MEDLINE; 81215630.
                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               x-RAY CRYSTALLOGRAPHY (3.0 ANGSTROMS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GLYCOBIOLOGY 1:393-404(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRUCTURE OF CARBOHYDRATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RUDDON R.W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFIDE BONDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE;
               198
                                      27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ARE ESSENTIAL FOR THE MAINTENANCE OF PREGNANCY.
SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,
                       PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 86
             PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 257
                                                             40.5%;
l Similarity 100.0%;
l39; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BAHL O.
CHEM. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94261179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHEM.
                                                                                                                1133
158
113
113
113
113
113
1141
1152
1152
1153
1153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ., HIYAMA J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  256:6587-6592(1981)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     265:312-317(1990).
                                                                                                                A,
                                                                                                           20
165
77
92
130
130
110
110
120
120
141
147
152
158
158
137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RENWICK A.G.C.;
                                                                                                                  W.
                                                          Score 1030; DB 1;
Pred. No. 1.12e-221;
0; Mismatches 0;
                                                                                                                           U
                                                                                                                                                                                                                                                                                               CHORIOGONADOTROPIN BETA CHAIN.
                                                                                                              FF1D4802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CARLE G.,
                                                                                                               CRC32;
                                                                                                                           <u></u>6)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PERINI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BOIME I.;
                                                                                      Length 165;
                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
H
                                                              0;
                                                              Gaps
                                                              0
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TNR1_PIG STAN
P50555;
01-OCT-1996 (REL. 3
01-OCT-1996 (REL. 3
01-NOV-1997 (REL. 3
                                  DOMAIN
DOMAIN
REPEAT
REPEAT
REPEAT
REPEAT
REPEAT
DOMAIN
DISULFID
                                                                                                                                                                                                                                                                                                                                  PROSITE; F
PROSITE; F
PROSITE; F
RECEPTOR;
                                                                                                                                                                                                                                                                                                                                                                                                                                  RECRUITS CASPASE-8 TO THE ACTIVATED RECEPTOR. THE RESULTING AGGREGATE CALLED THE DEATH-INDUCING SIGNALING COMPLEX (DISC) AGGREGATE CASPASE-8 PROTECLYTIC ACTIVATION WHICH INITIATES THE SUBSEQUENT CASCADE OF CASPASES (ASPARTATE-SPECIFIC CYSTEINE SUBSEQUENT CASCADE OF CASPASES (ASPARTATE-SPECIFIC CYSTEINE PROTEASES) MEDIATING APOPTOSIS (BY SIMILARITY).

-!- SUBUNIT: THE BINDING TO THE EXTRACELLULAR DOMAIN OF THEM LEADS TO HOMOTRIMERIZATION. ONCE AGGREGATED THE RECEPTORS DEATH DOMAINS PROVIDE A NOVEL MOLECULAR INTERFACE THAT INTERACTS SPECIFICALLY WITH THE DEATH DOMAIN OF TRADD VARIOUS TRADD-INTERACTING PROTEINS SUCH AS TRAFES, RIP AND POSSIBLY FADD, ARE RECRUITED TO THEM COMPLEX BY THEIR ASSOCIATION WITH TRADD. THIS COMPLEX ACTIVATES AT LEAST TWO DISTINCT SIGNALING CASCADES, APOPTOSIS AND MERCADES AT LEAST TWO DISTINCT SIGNALING CASCADES, APOPTOSIS AND
              CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                   DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUTER B., PAULI U.H.;
GENE 163:263-266(1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUS SCROFA (PIG).
EUKARYOTA; METAZOA; CHO
EUTHERIA; ARTIODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TNFR1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE=KIDNEY;
MEDLINE; 96011645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TUMOR NECROSIS
                                                                                                                                                                                                                                                                                                            CHAIN
                                                                                                                                                                                                                                                                                                                        SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                 NF-KAPPA B SIGNALING (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN.
-!- SIMILARITY: CONTAINS A LA-NGFR/TNFR-TYPE CYSTEINE-RICH REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM
 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSSKAPPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SLPSPSRLPGPSDTPILPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SLPSPSRLPGPSDTPILPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP
                                                                                                                                                                                                                                                                                                                                              U19994; G1141753; -.
TE; PS00652; TNFR_NGFR_1; 3.
TE; PS50050; TNFR_NGFR_2; 2.
TE; PS50017; DEATH_DOMAIN; 1
                                                                                                                                                                                                                                                                                                                                     TRANSMEMBRANE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              34, CREATED)
34, LAST SEQUENCE UPDATE)
35, LAST ANNOTATION UPDATE)
CTOR RECEPTOR 1 PRECURSOR (P60) (TNF-R1) (P55).
                                                             CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  165
                                                                                                                                                                                                                                                                                                                                     GLYCOPROTEIN;
             DEATH DOMAIN.
BY SIMILARITY.
POTENTIAL.
                                                                                                                                                                                                                CYTOPLASMIC ()
4 X TNFR-CYS.
TNFR-CYS 1.
TNFR-CYS 2.
TNFR-CYS 3.
                                                                                                                                                                                                       INFR-CYS
                                                                                                                                                                                                                                                                                            TUMOR NECROSIS FACTOR RECEPTOR 1. EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                        POTENTIAL
 POTENTIAL
                                                                                                                                                                                                                                                                                   POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      461 AA
                                                                                                                                                                                                                                                                                                                                  REPEAT; SIGNAL; APOPTOSIS.
```

ö

(POTENTIAL)

SO

g å 밁 Ş В

Ş

```
[3]
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
MEDLINE; 91285014.
A BARRETT K., TAYLOR-FISHWICK D.A., COPE
A GRAY P.W., FELDMANN M., FOXWELL B.M.J.;
A GRAY THMUNOL. 21:1649-1656(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                         SEQUENCE FR
MEDLINE; 94
BEBO B.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAY-1992 (REL.
01-MAY-1992 (REL.
01-NOV-1997 (REL.
               <del>;</del>
                                                                                                                                            MEDLINE; 94245292.
BEBO B.F., LINTHICUM D.S.;
IMMUNOGENETICS 39:450-451(1994).
                                                                                                                                                                                                  MEDLINE: 92039815.
ROTHE J.G., BROCKHAUS M.,
IMMUNOGENETICS 34:338-340
                                                                                                                                                                                                                                                                                                                                 GOODWIN R.G., ANDERSON D., JERZY R., DAV COPELAND N.G., JENKINS N.A., SMITH C.A., MOL. CELL. BIOL. 11:3020-3026(1991).
                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. MEDLINE; 91246168.
                                                                                                                                                                                                                                                                                                                                                                                                LEWIS M., TARTAGLIA L.A., LEE A., BENNETT G.L., R
WONG G.H., CHEN E.Y., GOEDDEL D.V.;
PROC. NATL. ACAD. SCI. U.S.A. 88:2830-2834(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EUKARYOTA;
EUTHERIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TUMOR NECROSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TNR1_MOUSE P25118;
                                                                                                    ROTHE
                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE;
                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MUS MUSCULUS (MOUSE).
                                                                                                                                                                                                                                    TISSUE-SPLEEN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                83
 HE J., BLUETHMANN H., GENTZ R., LESSLAUER W., STEINMETZ M.;
IMMUNOL. 30:165-175(1993).

FUNCTION: RECEPTOR FOR THE ALPHA. THE ADAPTOR MOLECULE FADD RUCKTION: RECEPTOR FOR THE ACTIVATED RECEPTOR. THE RESULTING RECRUITS CASPASE-8 TO THE ACTIVATED RECEPTOR. THE RESULTING AGGREGATE CALLED THE DEATH-INDUCING SIGNALING COMPLEX (DISC) PREFORMS CASPASE-8 PROTEOLYTIC ACTIVATION WHICH INITIATES THE SUBSEQUENT CASCADE OF CASPASES (ASPARTATE-SPECIFIC CYSTEINE SUBSEQUENT CASCADE OF CASPASES (ASPARTATE-SPECIFIC CYSTEINE PROTEASES) MEDIATING APOPTOSIS (BY SIMILARITY).

SUBUNIT: THE BINDING TO THE EXTRACELLULAR DOMAIN OF THERI LEADS HOMOTRIMERIZATION. ONCE AGGREGATED THE RECEPTORS DEATH DOMAINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KQDTICNCHSGFFLRDKECVSCVNCKNA-DCKNLCPATSETRNDFQDTGTT 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SCSKCRSEMSQVEISPCTVDRDTVCGCRKNQVRKYWSETLFQCLNCSLCPNGTVQLPCLE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KONTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              l Similarity
125; Conser
                                                                                                              93156721.
                                                                                                                                                                                                                                                                                                                                                                                                                                    91187885.
                                                                                                                                                                               FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA; RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        151
461 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40.5%;
llarity 73.1%;
Conservative
                                                                                                                                                                               N.A.
                                                                                                                                                                                                  34:338-340(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22, CREATED)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         151
50696 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDAT
RECEPTOR 1 PRECURSOR
                                                                                                                                                                                                           GENTZ R., LESSLAUER W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1028; DB 1;
Pred. No. 3.59e-221;
24; Mismatches 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        POTENTIAL.
8E2C350A CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 PRECURSOR (P60) (TNF-R1) (P55).
                                                                                                                                                                                                                                                                            м. ј. ;
                                                                                                                                                                                                                                                                                        COPE A.P.,
                                                                                                                                                                                                                                                                                                                                                      DAVIS T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₹
                                                                                                                                                                                                                                                                                        KISSONERGHIS
                                                                                                                                                                                                                                                                                                                                                       BRANNAN C.I.,
                                                                                                                                                                                                                                                                                                                                                                                                                       RICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                       G
                                                                                                                                                                                                                                                                                                                                                                                                                       'n
                                                                                                                                                                                                                                                                                        A. M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             بر
                                          Ş
                                                                                    Ş
                                                                                                                               Ş
           RESULT
                                                                  밁
                                                                                                           밁
                                                                                                                                                      맑
                                                                                                                                                                                                                      Query Match
Best Local S
Matches 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; M60468; G199026; ...
EMBL; M59377; G202097; ...
EMBL; X59238; G5379; ...
EMBL; X57796; G54849; ...
EMBL; L26349; G430733; ...
EMBL; M6656; G202102; JOINI
EMBL; M68067; G202102; JOINI
EMBL; M76655; G202102; JOINI
EMBL; M76655; G202102; JOINI
EMBL; M88067; G202102; JOINI
EMBL; M76655; G202102; JOINI
EMBL; M76655; G202102; JOINI
EMBL; M36634; GQMSTI.
PIR; S16677; S16677.
PIR; S19021; S19021.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MGD; MGI:98781; TNFR1.
PROSITE; PS00652; TNFR.
PROSITE; PS50050; TNFR.
PROSITE; PS50017; DEAT!
                                                                                                                                                                                                                    DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                    DOMAIN
REPEAT
REPEAT
REPEAT
REPEAT
REPEAT
DOMAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
TRANSMEM
TNR1_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RECEPTOR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HSSP; P19438; 1TNR
                                           143
                                                                161
                                                                                                            101
                                                                                      83
                                                                                                                                 23
                                                                                                                                                     41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROVIDE A NOVEL MOLECULAR INTERFACE THAT INTERACTS SPECIFICALLY WITH THE DEATH DOWALN OF TRADE. VARIOUS TRADE-INTERACTING PROTEINS SUCH AS TRAFS, RIP AND POSSIBLY FADD, ARE RECRUITED TO THE COMPLEX BY THEIR ASSOCIATION WITH TRADD, THIS COMPLEX ACTIVATES AT LEAST TWO DISTINCT SIGNALING CASCADES, APOPTOSIS AN NF-KAPPA B SIGNALING (BY SIMILARITY).

SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN.

SIMILARITY: CONTAINS A LA-NGER/TNER-TYPE CYSTEINE-RICH REGION.
                                          DSLCPQGKYVHSKNNSICCTKCHKGTYLVSDCPSPGRDTVCRBCEKGTFTASQNYLRQCL 100
                                                                                   Ç
                                                                                                                                DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                          118;
                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TRANSMEMBRANE;
                                                                                                                                                                                                                      454
                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                      AA;
                                                                                                                                                                                                                  TNFR_NGFR_2; 3.
DEATH_DOMAIN; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TNFR_NGFR_1; 3.
                                                                                                                                                                                     37.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GLYCOPROTEIN; REPEAT; SIGNAL; APOPTOSIS POTENTIAL.
                                                                                                                                                                                                                      ₹
                                                                                                                                                                        Score 960; DB 1; Le
Pred. No. 5.34e-204;
27; Mismatches 26;
                                                                                                                                                                                                                                                             BY SIMILARITY
                                                                                                                                                                                                                                ×
                                                                                                                                                                                                                                                     POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                           TNFR-CYS 4.
DEATH DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CYTOPLASMIC (POTENTIAL)
4 X TNFR-CYS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EXTRACELLULAR (POTENTIAL).
POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TUMOR NECROSIS FACTOR RECEPTOR 1.
                                                                                                                                                                                                                                           POTENTIAL
 PRT;
                                                                                                                                                                                                                    486EEC09
                                                                                                                                                                                                                                                                                                                                                                                                                                 NFR-CYS
                                                                                                                                                                                                                                 ດ
 461
                                                                                                                                                                                                                    REF. 6).
≵
                                                                                                                                                                                               Length 454;
                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APOPTOSIS AND
                                                                                                                                                                          <u>ب</u>
                                                                                                                                                                        Gaps
                                                                                                                                82
```

ŗ

```
ş
                 밁
                                  Query Match
Best Local S
Matches 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P22934;
01-AUG-1991 (REL. 1
01-MAR-1992 (REL. 2
01-NOV-1997 (REL. 3
                                                                                                            REPEAT
REPEAT
REPEAT
REPEAT
DOMAIN
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                      - NA
                                                                    CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                          DOMAIN
DOMAIN
REPEAT
                                                                                                                                                                                                                                                                    DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                     SIGNAL
CHAIN
                                                                                                                                                                                                                                                                                                                                              EMBL; M63122; G207362;
PIR; B36555; B36555.
                                                                                                                                                                                                                                                                                                                                                                                                                                             ---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HIMMLER A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EUTHERIA; RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RATTUS NORVEGICUS (1 EUKARYOTA; METAZOA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TNFR1 OR TNFR-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TUMOR NECROSIS
                                                                                             CARBOHYD
                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                       RECEPTOR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LANTZ
                 41
 23
                                                                                                                                                                                                                                                                                                                                                              NF-KAPPA B SIGNALING (BY SIMILARITY).
SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN.
SIMILARITY: CONTAINS A LA-NGFR/TNFR-TYPE CYSTEINE-RICH REGION
         DNLCPQGKYAHPKNNSICCTKCHKGTYLVSDCPSPGQETVCEVCDKGTFTASQNHVRQCL 100
DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSETASENHLRHCL
                                                                                                                                                                                                                                                                                                                                         P19438;
                                   l Similarity
115; Conse
                                                                                                                                                                                                                                                                                                      TRANSMEMBRANE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MAURER-FOGY
                                                                    37.2%;
larity 67.3%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N.A.
                                                                                                                                                                                                                                                                                                                                         1TNR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FACTOR
                                                                 448
78
79
117
125
1143
158
166
169
195
195
195
195
195
195
195
                                                                                                                                                                                                                                                                                                             ; TNFR_NGFR_1; 3.; TNFR_NGFR_2; 3.; DEATH_DOMAIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19,
21,
35,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (RAT).
A; CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CREATED)

LAST SEQUENCE UPDATE)

LAST ANNOTATION UPDATE)

RECEPTOR 1 PRECURSOR (P
                                                                                                                                                                                                                                                                                                       GLYCOPROTEIN;
                                                                    ¥:
                                  Score
Pred.
25; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KROENKE M., SCHEURICH
                                                                  BY SIMILARITY.
                                                                                                                                                                                               TNFR-CYS
DEATH DOM
BY SIMILA
                                                                                                                                                                                                                                        CYTOPLASMIC (POTENTIAL).
4 X TNFR-CYS.
TNFR-CYS 1.
                                                                                                                                                                                                                         TNFR-CYS
                                                                                                                                                                                                                                  TNFR-CYS
                                                                                                                                                                                                                                                                           EXTRACELLULAR
                                                                                                                                                                                                                                                                                     TUMOR NECROSIS
                                                                                                                                                                                                                                                                                             POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                   EATH DOMAIN.

SIMILARITY.

SIMILARITY.

SIMILARITY.

Y SIMILARITY.
                                  re 944; DB 1; Le
1. No. 5.76e-200;
Mismatches 31;
                                                                                                                                                                                                                                                                                                    REPEAT; SIGNAL; APOPTOSIS
                                                                                                                                                                                                                                                                            S FACTOR RECEPTOR 1. (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (P60) (TNF-R1) (P55)
                                                  Length 461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADOLF
                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PFIZENMAIER K., G.R.;
                                  0
                                  Gaps
82
                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                  0
```

```
RESULT TO SEE TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     망.. 성
                                       밁
                                                                    ·Ω
                                                                                                             멍
                                                                                                                                              Š
                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
Š
                                                                                                                                                                                                                         Query Match
Best Local S
Matches 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGHB_PAPAN STAND P07434; 01-APR-1988 (REL. 07 01-APR-1988 (REL. 07 01-OCT 1996 (REL. 34 CHORIOGONADOTROPIN B
                                                                                                                                                                                                                                                                                                                   DISULFID
DISULFID
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE;
PROSITE;
HORMONE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE; 87106851.
CRAWFORD R.J., TREGEA
GENE 46:161-169(1986)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAPIO ANUBIS
EUKARYOTA; MI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUBUNIT).
                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; M14966; G1765
PIR; A25808; KTBAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EUTHERIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ISSP;
 318
                                     147
                                                                            258
                                                                                                                                                198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           83
                                                                                                             87
                                                                                                                                                                                    27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FUNCTION: STIMULATES THE OVARIES TO SYNTHESIZE ARE ESSENTIAL FOR THE MAINTENANCE OF PREGNACY. SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO TLUTROPIN, FOLLITROPIN AND GONADOTROPIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE SPECIFICITY: PLACE THERE ARE AT LEAST FIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TWO OF THESE ARE EXPRESSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KQNTVCNCHAGEFLSGNECTPCSHCKKNQECMKLCLPPVANVTNPQDSGTA
                                                                                                                                              SCKTCRKEMFQVEISPCKADMDTVCGCKKNQFQRYLSETHFQCVDCSPCENGTVTIPCKE
 SLPSPSRLPGPSDTPILPQ 336
                                     SPPSPSRLLEPAGTPFLPQ 165
                                                                                          IRLPGCPPGVDPMVSVPVALSCRCALCRRSTSDCGGPKDHPLTCDDPNLQASSSSKDPPP 146
                                                                            IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQE
                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PS00261; GLYCO_HORMONE_BETA_1; PS00689; GLYCO_HORMONE_BETA_2; GLYCOPROTEIN; SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IS (OLIVE METAZOA;
                                                                                                                                                                                                                                                                                                   165
                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1HCN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               G176573;
                                                                                                                                                                                                                                                                                                   ΑA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TREGEAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               07,
07,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07, CREATED)
07, LAST SEQUENCE UPDATE)
34, LAST ANNOTATION UPDAT
BETA CHAIN PRECURSOR (CH
                                                                                                                                                                                                                                                                                                                     92
130
108
110
120
120
141
141
147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHORDATA;
                                                                                                                                                                                                                                        33.7%;
                                                                                                                                                                                                                                                                                                   17592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     G.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PLACENTA
                                                                                                                                                                                                                                                                                                   ¥.
                                                                                                                                                                                                                                                                                                               CHORIOGONADOTROPIN BY SIMILARITY.
                                                                                                                                                                                                                         Score
Pred.
14; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COPIES OF CG-RELATED GENES SED IN THE BABOON PLACENTA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NIALL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NOTATION UPDATE)
PRECURSOR (CHORIONIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                   78987D30
                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                        857;
No. 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       H.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          165
                                                                                                                                                                                                                         DB 1; Le
1.26e-178;
tches 12;
                                                                                                                                                                                                                                                                                                   CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TETRAPODA;
                                                                                                                                                                                                                                                          Length 165;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BETA CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AND A UNIQUE O THYROTROPIN,
                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    THE STEROIDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GONADOTROPHIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    193
                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AT LEAST
                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      THAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                160
                                                                                                                                                257
                                                                                                                                                                                    86
                                                                                                                                                                                                                         0
```

```
CHARACTERIZED BY INFERENCE CHARACTERIZED BY INFEREN
CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LSHB_HU
P01229;
                                                                                           HORMONE; GLYCOPRIDISEASE MUTATION SIGNAL 1
                                                                                                                               PROSITE;
                                                                                                                                                                                                                                                                                     WEISS J., ARELING THE RIGIL J. MED. 326:179-183(1992).

PROMOTES SPERMATOGENES
TO STATE THE PROMOTES SPERMATOGENES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
MEDLINE; 84093590.
TALMADGE K., VAMVAKOPOULOS
NATURE 307:37-40(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21-JUL-1986 (REL. 01, CREATED)
01-NOY-1995 (REL. 32, LAST SEQUENCE UPDATE)
01-NOY-1995 (REL. 32, LAST ANNOTATION UPDATE)
LUTROPIN BETA CHAIN PRECURSOR (LUTEINIZING HORMONE) (LSH-B) (LH-B).
                                                                                                                                                                                                                                                                                                                                                                                                                                           WEISSHAAR G.,
EUR. J. BIOCHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE; 73221227
CLOSSET J., HENNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SAIRAM M.R., LI C.H.;
BIOCHIM. BIOPHYS. ACTA 412:70-81(1975).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 21-141.
                                                                                                                                                                                                                                                                                                                                              MEDLINE; 92085985
                                                                                                                                                                                                                                                                                                                                                                                             KEUTMANN H.T.,
                                                                                                                                                                                                                                                                                                                                                                                                                     STRUCTURE BY NMR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRUCTURE OF CARBOHYDRATE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY PARTIAL SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SHOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY SEQUENCE OF 21-141.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EUTHERIA; PRIMATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HOMO SAPIENS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OME B., PARLOW A.F. CLIN. ENDOCRINOL.
                                                                                                                                                                                                                                             FUNCTION: PROMOTES SPERMATOGENESIS AND OVULTAION BY STIMULATIN THE TESTES AND OVARIES TO SYMPHESIZE STEROIDS.
SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, LUTROPIN, FOLLITROPIN AND GONADOTROPIN.
                                                                                                                                                                                                                        DISEASE: DEFECTS IN LHB ARE A CAUSE OF HYPOGONADISM WHICH
                                                                                                                                                                                                                                       TISSUE SPECIFICITY: PITUITARY.
                                                                                                                                                                                                                                                                                                                                                                                                                                           SHAAR G., HIYAMA J., RENWICK A.G.C., J. BIOCHEM. 195:257-268(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HUMAN
                                                                                                                                                                                                                                                                                                                                                                                ENDOCRINOL.
                                                                                                                                                                                                                                                                                                                                                           ARG-74
                                                                                                                PS00261; GLYCO_HORMONE_BETA_1; 1.
PS00689; GLYCO_HORMONE_BETA_2; 1.
GLYCOPROTEIN; SIGNAL; PSEUDOHERMAPHRODITISM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     73090987.
, PARLOW A.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76062547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NS (HUMAN).
METAZOA; CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HENNEN G., LEQUIN 29:97-100(1973).
 HUA Q.-X., WEISS M
L. 6:904-913(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                   OF 58-77
 141
77
92
130
108
110
120
                                                                                                                                                                                                                INFERTILITY AND PSEUDOHERMAPHRODITISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           METAB. 36:618-621(1973)
                                                                                                                                                                                                                                                                                                                                 WHITCOMB R.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N.C.,
         LUTROPIN BETA CHAIN.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERTEBRATA; TETRAPODA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                           M.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FIDDES J.C.;
                                                                                                                                                                                                                                                                                                                                 HARRIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIMTZ
                                                                                                                                                                                                                                                                                                                                 P.E.,
                                                                                                                                                                                                                                                                                                                                 CROWLEY W.F.,
                                                                                                                                                                                                                                                                                              BY STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MAMMALIA;
```

```
뮹
                                         Ş
                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        닭
Š
                                                                 吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FFFFF
                                                                                     Matches
                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGHB_CALJA
P51500;
01-OCT-1996
01-OCT-1996
01-OCT-1996
                                                                                                                                                                           CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CONFLICT
                                                                                                                                                      CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                      HORMONE;
SIGNAL
                                                                                                                                                                                                                                                                                                         MEDLINE; 96115012.

SIMULA A.P., AMATO F., FAAST R., LOPATA A., BERKA J., NORMAN R.J.;
BIOL. REPROD. 53:380-389(1995).

1- FUNCTION: STIMULATES THE OYARIES TO SYNTHESIZE THE STEROIDS THA
ARE ESSENTIAL FOR THE MAINTENANCE OF PREGNANCY.

1- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA
CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,
LUTROPIN, FOLLITROPIN AND GONADOTROPIN.

1- TISSUE SPECIFICITY: PLACENTA.
                                                                                                                                  SEQUENCE
                                                                                                                                              CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                        CALLITHRIX JACCHUS EUKARYOTA; METAZOA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUBUNIT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHORIOGONADOTROPIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                              EUTHERIA;
                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE-PLACENTA;
 258
                                           198
                                                                                                                                                                                                                                                                                                                                                                                                                         EQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              198
           87 VRLPGCRPGVDPVVSMPVALSCRCGLCRRSYSDCGSLRNEPLGCDYSTFQDSSS-KDPPR 145
                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27 PWCHPINAILAVEKEGCPVCITVNTTICAGYCPTMMTVLQAVLPPLPQVVCTYRDVRFES
                                                                 27
                                                      PLCRPVNAILAAEKEGCPVCVAFNTTICAGYCSSMVRVLQTILPPLPQSVCNYHELRFTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IRLPGCPRGVDPVVSFPVALSCRCGPCRRSTSDCGGPKDHPLTCDHPQL 135
 IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES
                                          PRCRPINATLAVEKEGCPYCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES
                                                                                      Similarity
90; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
92; Conser
                                                                                                                                                                                                                                                                         PS00261; GLYCO_HORMONE_BETA_1; PS00689; GLYCO_HORMONE_BETA_2;
                                                                                                                                                                                                                                                                   GLYCOPROTEIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  39
76
132
141 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (REL.
(REL.
(REL.
                                                                                                                                  164 AA;
                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                   G606607;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              34, CREATED)
34, LAST SEQUENCE UPDATE)
34, LAST ANNOTATION UPDATE)
N BETA CHAIN PRECURSOR (CHORIONIC GONADOTROPHIN BETA
                                                                                                                                 151
17712
                                                                                                                                                      164
77
92
130
108
110
120
146
                                                                                                                                                                                                                                                                                                                                                                                                                                                        (COMMON MARMOSET).
; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  39
76
135
15345
                                                                                                 27.9%;
64.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   84.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29.18;
                                                                                                                                                                                                                                                                  SIGNAL
                                                                                                                                  MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ž
                                                                                                                                         BY SIMILARITY.
CHORIGONADOTROPIN B
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q -> R (IN HYPOGONA

RECEPTOR-BINDING).

E -> Q (IN REF. 2).

MISSING (IN REF. 2).

HPQL -> PQH (IN REI.

HPQL -> PQH (IN REI.
                                                                                    Score 709; DB 1; I
Pred. No. 3.56e-141;
25; Mismatches 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 740; DB 1; L
Pred. No. 7.12e-149;
                                                                                                                                  E36A4DB3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R (IN HYPOGONADISM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (IN REF. 2).
PQH (IN REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        164
                                                                                                                                  CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                          Length 164;
                                                                                                                                                                                                                                            BETA CHAIN
                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ,
                                                                                                                                                                                                                                                                                                                                                                  STEROIDS THAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ဝူ
                                                                                      ٠,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                           257
                                                                 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   86
                                                                                      ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

밁

146

NLTSPSQLLEPADPPLVPQ

164

```
RESULT
ID LA
AC PO
DT 11
DT 01
DT 01
DT 01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOLUTION OF THE PROPERTY OF TH
                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 8
    LSHB_BOVIN
P04651;
13-AUG-1987
01-JAN-1988
01-OCT-1996
LUTROPIN BET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-FEB-1991
01-NOV-1995
01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIGNAL
CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LEIGH S. EAA., STEWART F.;

J. MOL. ENDOCRINOL. 4:143-150(1990).

-I- FUNCTION: PROMOTES SPERMATGGENESIS AND OVULATION BY STIMULATING THE TESTES AND OVARIES TO SYNTHESIZE STEROLDS.

-I- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, FOLLITROPIN AND GONADOTROPIN.

LUTROPIN, FOLLITROPIN AND GONADOTROPIN.

EMBL; X80116; G510971; -.

EMBL; X53669; E27544; ALT_SEQ.

PIR; S15676; E27544; ALT_SEQ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EQUUS ASINUS (DONKEY).
EUKARYOTA; METAZOA; CH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-FEB-1991 (REL. 17, CREATED)
01-NOV-1995 (REL. 32, LAST ANOOTATION UPDATE)
01-CCT-1996 (REL. 34, LAST ANOOTATION UPDATE)
LUTROPIN/CHORIOGONADOTROPIN BETA CHAIN PREC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LSHB_EQUAS
P19794;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUBMITTED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EUTHERIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        318
                                                                                                                                                                                                                                   144
                                                                                                                                                                                                                                                                         258
                                                                                                                                                                                          318 -SLPSPS-RLPGPS 329
                                                                                                                                                                                                                                                                                                                                                         198
                                                                                                                                                                                                                                                                                                                 87
                                                                                                                                                                                                                                                                                                                                                                                                27
                                                                                                                                                                                                                              QPLTSTSTPTPGAS 157
                                                                                                                                                                                                                                                                                          SLPSPSRLPGPSDTPILPQ
                                                                                                                                                                                                                                                                       IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP
                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
85; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PS00261; GLYCO_HORMONE_BETA_1; PS00689; GLYCO_HORMONE_BETA_2; GLYCOPROTEIN; SIGNAL.
        BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90262634.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                M., COMBARNOUS (JUL-1994) TO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; METAZOA; CHORDATA; PERISSODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        169
(REL. 05, CREATED)
(REL. 06, LAST SEQUENCE UPDATE)
(REL. 34, LAST ANNOTATION UPDATE)
TA CHAIN PRECURSOR (LUTEINIZING HORMONE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            46
54
58
113
                                                                                                                                                                                                                                                                                                                                                                                                                                      24.8%;
larity 63.4%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LHCN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₽,
                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20
169
77
92
130
108
110
120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ဝှု
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          105-169 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL/GENBANK/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 630; DB 1;
Pred. No. 1.18e-1;
21; Mismatches :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LUTROPIN/CHORIOGONADOTROPIN BETA CHAIN.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9D4B5421 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       169
                                                                                                          141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STEWART F.;
J DATA BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                          ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                      121;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (LSH-B/CG-B)
                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
      (LSH-B) (LH-B).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                      ū
                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                               143
                                                                                                                                                                                                                                                                                                                                                                                             86
                                                                                                                                                                                                                                                                                                                                                     257
```

```
밁
                                                                                                                                                                                                     Š
                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. MEDLINE; 85207729. VIRGIN J.B., SILVER J. BIOL. CHEM. 260:
                                                                                                                                                                                                                                                                                                   CARBOHYD
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                   DISULFID DISULFID DISULFID DISULFID DISULFID DISULFID DISULFID DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE;
PROSITE;
HORMONE;
                                                            LSHB_HORSE STANDARD; PRT; 169 AA. P08751; P01234; 01-AUG-1988 (REL. 08, CREATED) 01-JUL-1993 (REL. 26, LAST SEQUENCE UPDATE) 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE) LUTROPIN/CHORIOGONADOTROPIN BETA CHAIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                SIGNAL
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        THE TESTES AND OVARIES TO SYNTHESIZE STEROIDS.

-!- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN, LUTROPIN, FOLLITROPIN AND GONADOTROPIN.

EMBL; M10077; G163301; -.

EMBL; M11506; G163299; -.
                  EQUUS CABALLUS (HORSE).
EUKARYOTA; METAZOA; CHORDATA;
EUTHERIA; PERISSODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MAGHUIN-ROGISTER G., HENNEN G.;
EUR. J. BIOCHEM. 39:235-253(1973).
-i- FUNCTION: PROMOTES SPERMATOGENESIS AND OVULATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LHB.
BOS TAURUS (BOVINE).
EUKARYOTA; METAZOA; CHO
EUTHERIA; ARTIODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIR; A01499; UTBOB. HSSP; P01233; 1HCN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 21-139. MEDLINE; 74075724.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE; 851
MAURER R.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A. MEDLINE; 85182575.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       J. BIOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE;
                                                                                                                                                                                                                        27
                                                                                                                                                             258
                                                                                                                                                                                                      198
                                                                                                                                                                       87 VRLPGCPPGVDPMVSFPVALSCHCGPCRLSSTDCGGPRTQPLACDHPPLPD 137
                                                                                                                                                                                                               PLCQPINATLAAEKEACPVCITFTTSICAGYCPSMKRVLPVILPPMPQRVCTYHELRFAS
                                                                                                                                                            IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQD
                                                                                                                                                                                                      PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES
                                                                                                                                                                                                                                                Similarity 72; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                PS00261; GLYCO_HORMONE_BETA_1; PS00689; GLYCO_HORMONE_BETA_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHEM.
                                                                                                                                                                                                                                                                                                    1
21
29
43
44
54
54
113
113
112
112
126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SILVER B.J., THOMASON A.R., NILSON J.H.;
M. 260:7072-7077(1985).
                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                          Ą,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        260:4684-4687(1985).
                                                                                                                                                                                                                                                                                      20
141
77
92
130
110
110
120
33
33
37
74
112
123
126
15202
                                                                                                                                                                                                                                                                                                                                                                                                                                                       GLYCOPROTEIN
                                                                                                                                                                                                                                                         24.28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                           WW.
                                                                                                                                                                                                                                                                                       MISSING (IN REF. 2).

Q -> E (IN REF. 3).

P -> S (IN REF. 2).

GP -> PG (IN REF. 3).

Q -> E (IN REF. 3).

W; 82879D1F CRC32;
                                                                                                                                                                                                                                                                                                                                                                 LUTROPIN BETA OF SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                               Score 614; DB 1; I
Pred. No. 1.01e-117;
22; Mismatches 17;
                               VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                 BETA CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TETRAPODA;
                                                                                                                                                                                                                                                                                                        EF. 2).
. 3).
. 2).
. F. 3).
                                                                                                                                                                                                                                                                    Length 141;
                                                              (LSH-B/CG-B)
                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ВУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STIMULATING
                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                      257
                                                                                                                                                                                                                          86
```

0

```
3385
                                                     Ş
                                                                      밁
                                                                                  Š
                                                                                                    밁
                                                                                                                  Ş
                                                                                                                                   밁
                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE; 92357035
SHERMAN G.B., WOLL
THREADGILL D.S., S
MOL. ENDOCRINOL.
LSHB_SHEEP
P01231;
21-JUL-1986
01-NOV-1995
                                                                                                                                                                                                                       CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                            PROSITE;
PROSITE;
HORMONE;
SIGNAL
                                                                                                                                                                                                       DISULFID DISULFID
                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                     STRUCTURE OF CARBOHYDRATES
                                                                                                                                                                                                                                                                                                                                                                                                                                    CHORIOGONADOTROPIN, PARTIAL SEQUE WARD D.N., MOORE W.T. JR., BURLEI J. PROTEIN CHEM. 1:263-280(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUGINO H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 21-169.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BOUSFIELD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 21-169.
MEDLINE; 87250476.
                                                      318
                                                                      144
                                                                                                                    198
                                                                                                    87
                                                                                                                                   27
                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USFIELD G.R., LIU W.-K., SUGINO H.,
BIOL. CHEM. 262:8610-8620(1987).
                                                                     QPLTSTSTPTPGAS
                                                                                                                 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 257
                                                                                                                            PLCRPINATLAAEKEACPICITFTTSICAGYCPSMYRVMPAALPAIPQPYCTYRELRFAS 86
                                                                                             IRLPGCPPGVDPMVSFPVALSCHCGPCQIKTTDCGVFRDQPLACA-P--QASSSSKDPPS 143
                                                                                    IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP 317
                                                      -SLPSPS-RLPGPS
                                                                                                                                                   Similarity
84; Conser
                                                                                                                                                                                                                                                                   PS00261; GLYCO_HORMONE_BETA_1; PS00689; GLYCO_HORMONE_BETA_2; GLYCOPROTEIN; SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ., BOUSFIELD G.R., MOORE W.T. CHEM. 262:8603-8609(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   87250475
                                                                                                                                                                                  169
(REL.
                                                                                                                                                                                                1
1
1
1
1
1
1
1
1
1
1
3
3
3
                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WOLFE M.W., FARMERIE T.A., S., SHARP D.C., NILSON J.H. DL. 6:951-959(1992).
                                                                                                                                                                                8
                        STANDARD;
01,
32,
                                                                                                                                                        24.18; 62.78;
                                                                                                                                                                                                169
77
92
130
108
110
120
                                                      329
                                                                                                                                                                                17865
CREATED)
LAST SEQUENCE UPDATE)
                                                                                                                                                                                  Z
                                                                                                                                                                                            LUTROPIN/CHORIOGONADOTROPIN BETA CHAIN.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE.
BURLEIGH B.D.
                                                                                                                                                 Score
Pred.
22; M
                                                                                                                                                                                        HETEROGENEITY
                       PRT;
                                                                                                                                                                                9AB1CAA3
                                                                                                                                                  Mismatches
                                                                                                                                                         613;
No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              T.A., CLAY C.M.,
                       141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JR.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WARD
                                                                                                                                                         DB 1; Le
L.77e-117;
                                                                                                                                                                               CRC32;
                                                                                                                                                                                                                                                                            ---
                       ≵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WARD
                                                                                                                                                                Length 169;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ö
                                                                                                                                                  Indels
                                                                                                                                                 5
                                                                                                                                                 Gaps
                                                                                                                                                 4
```

5 B

27 198

```
Query Ma
Best Loc
Matches
                                              MOD_RES
CARBONYD
VARIANT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                                         DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                             LUTROPIN, FOLLITROPIN AND EMBL; $64695; G408241; -. EMBL; $52488; G1320; -.
                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 21-139.
MEDLINE; 73190035.
SAIRAM M.R., SAMY T.S.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
MEDLINE; 93351742.
BROWN P., MCNEILLY J.R., WALLACE R.M., MCNEILLY A.S.,
MOL. CELL. ENDOCRINOL. 93:157-165(1993).
                                                                                                                                                                                                                       PROSITE; PS00261; GLYCO_HORMONE_BETA_1; 1. PROSITE; PS00689; GLYCO_HORMONE_BETA_2; 1. HORMONE; SIGNAL; GLYCOPROTEIN.
                                                                                                                                                                                                                                                                                                          WEISSHAAR G., HIYAMA J., RENWICK A.G.C.;
EUR. J. BIOCHEM. 192:741-751(1990).
-I- FUNCTION: PROMOTES SPERMATOGRAESIS AND OVULATION BY STIMULATING
THE TESTES AND OVARIES TO SYNTHESIZE STEROIDS.
-I- SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA
CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,
                                       SEQUENCE
                                                                                                                                                       DISULFID
                                                                                                                                                                 DISULFID
                                                                                                                                                                                                     CHAIN
                                                                                                                                                                                                                SIGNAL
                                                                                                                                                                                                                                                            PIR; A01500; UTSHB. PIR; S09232; S09232.
                                                                                                                                                                                                                                                                                                                                                                               STRUCTURE OF CARBOHYDRATE.
                                                                                                                                                                                                                                                                                                                                                                                                                                               J. BIOL. CHEM. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 21-139.
MEDLINE; 72211145.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        D'ANGELO-BERNARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LHB.
OVIS ARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
                                                                                                                                                                                                                                                   HSSP; P01233; 1HCN
                                                                                                                                                                                                                                                                                                                                                                                                 ARCH. BIOCHEM. BIOPHYS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE; 90245669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE-PITUITARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EUTHERIA; ARTIODACTYLA.
          Local
                    Match
h 23.7%;
Similarity 64.0%;
71; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACIDS
                                                                                                                                                                                                                                                                                                                                                                      91006170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (SHEEP).
METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                               RES.
                                                                                                                                                                                                                                                                                                                                                                                                                                               4 H.S., SWEENEY C.M.,
247:4365-4381(1972).
                                   130
1108
1100
120
121
31
33
141
30
59
63
72
81
123
126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ., MOUMNI M., JUTISZ
18:2175-2175(1990).
                                                                                                                                                                                                                                                                                                                                                                                                ., PAPKOFF H., LI C.H.; 153:572-586(1972).
                                       Ĭ
Score 602;
Pred. No. 8
22; Mismat
                                             MISSING (IN SOME MOLECU)
Q -> E (IN REF. 1).
L -> P (IN REF. 2).
R -> Q (IN REF. 2).
PM -> PPM (IN REF. 4).
E -> Q (IN REF. 3) AND 4
Q -> E (IN REF. 3 AND 4
                                                                                                                                            LUTROPIN BETA CHAIN.
BY SIMILARITY.
                                                                                                                                   BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BLOCKED.
                                                                                                                                                                                                                                                                                                    GONADOTROPIN.
                                       BA2C0204
e 602; DB 1; L
. No. 8.87e-115;
Mismatches 18;
                                      PG (IN REF.
E (IN REF. 3
2C0204 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         HOLCOMB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       X
                                                                                                                  SOME MOLECULES).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNIS
                                             . 4).
EF. 3 AND 4).
. 3 AND 4).
                                                                                                                                                                                                                                                                                                                                                                                                                                                        G. N.,
                   Length 141;
 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                         WARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLARK A.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         D.
 0
Gaps
 0
```

밁

87

137

```
Ş
                В
                                Ş
                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                              Query Match
Best Local S
Matches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-JUL-1986 (REL. 01, CREATED)
21-JUL-1986 (REL. 16, LAST SEQUENCE UPDATE)
01-NOV-1990 (REL. 34, LAST ANNOTATION UPDATE)
01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
                                                                                                      CONFLICT
CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                            HORMONE;
SIGNAL
CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                             PROSITE;
                                                                                                                                             MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                            J. MOL.
[2]
                                                                                                                                                                                                                                                                   LUTROPIN, FOLLITROPIN
EMBL; D00579; G217694; -.
PIR; A30322; UTPGB.
PIR; A48170; A48170.
                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. MEDLINE; 89306142. KATO Y., HIRAI T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LHB.
SUS SCROFA (PIG).
EUKARYOTA; METAZOA;
                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A. MEDLINE; 91063934. EZASHI T., HIRAI T.,
                                                                                                                                                                                                                                                             HSSP;
                                                                                                                                                                                                                                                                                                              <del>-</del>
                                                                                                                                                                                                                                                                                                                                   MAGHUIN-ROGISTER G., HENNEN G.;
EUR. J. BIOCHEM. 39:235-253(1973)
                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 21-139. MEDLINE; 74075724.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           EUTHERIA;
 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   258
                                198
                87
                                                27
                                                                                                                                                                                                                                                                                                   FUNCTION: PROMOTES SPERMATOGÉNESIS AND OVULATION BY STIMULATING THE TESTES AND OVARIES TO SYMPHESIZE STEROIDS.
SUBUNIT: HETERODIMER OF A COMMON ALPHA CHAIN AND A UNIQUE BETA CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CELL.
        IRLPGCPPGVDPTVSFPVALSCHCGPCRLSSSDCGGPRAQPLACDRP 133
IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDP
                                                                Similarity
71; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                   ENDOCRINOL.
                                                                                                                                                                                                                                           1233; 1HCN.
PS00261; GLYCO_HORMONE_BETA_1;
PS00689; GLYCO_HORMONE_BETA_2;
                                                                                                                                                                                                                                     SIGNAL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ARTIODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                           ENDOCRINOL.
                                                                                              141
                                                              23.5%;
larity 66.4%;
Conservative
                                                                                                      33
30
40
62
83
122
                                                                                                                                                                     21
29
43
46
54
51
113
                                                                                              AA;
                                                                                                                                                                                                                                     GLYCOPROTEIN.
                                                                                                      141
77
92
130
108
110
120
33
21
30
40
62
83
83
123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                   5:137-146(1990).
                                                                                              14889
                                                                                                                                                                                                                                                                                                                                                                           62:47-53(1989).
                                                                                              MW;
                                                                                                                                                                                                                                                                                             AND GONADOTROPIN
                                                              Score
Pred.
19; M
                                                                                                                                                                   LUTROPIN BETA O
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                      BLOCKED.
R -> Z.
N -> D (1)
V -> R (1)
S -> I (1)
I -> S (1)
GP -> PG
                                                                .4EF. 3).
.4N REF. 3).
.5 (IN REF. 3).
.-> PG (IN REF. 3).
. DA2EF539 CRC32;
.0 DA2EF539 DB '
                                                                                                                                                                                                                                                                                                                                                                                                                          WAKABAYASHI K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERTEBRATA;
                                                             2 598; DB 1; Ler
. No. 8.48e-114;
Mismatches 17;
                                                               Mismatches
                                                                                                             S (IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TETRAPODA;
                                                                                                                                                                                                                     CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                           KATO
                                                                             Length 141;
                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                           Υ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  308
                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (LH-B).
                                                              Gaps
                                                86
                                                              0
```

RESULT
ID LA
AC P
DT 00
DT 00
DT 00

LSHB\_BALAC P33088; 01-OCT-1993 01-OCT-1993 01-OCT-1996

(REL. (REL.

27, CREATED)
27, LAST SEQUENCE UF
34, LAST ANNOTATION

UPDATE)

STANDARD;

PRT;

118

₹

```
Ş
ş
                   밁
                                                    밁
                                                                     Query Match
Best Local S
Matches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LSHB_RAT
P01230;
21-JUL-1986
21-JUL-1986
01-OCT-1996
                                                                                                        DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
SEQUENCE
                                                                                                                                                                                                       PROSITE;
PROSITE;
                                                                                                                                                                                                                       -I- FUNCTION: PROMOTĖS SPĒRMATOGENESIS AND OVULATION BY STIMUL
THE TESTES AND OVARIES TO SYNTHESIZE STEPOIDS.
-I- SUBUNIT: HETERODIMEN OF A COMMON ALPHA CHAIN AND A UNIQUE
CHAIN WHICH CONFERS BIOLOGICAL SPECIFICITY TO THYROTROPIN,
LUTROPIN, FOLLITROPIN AND GONADOTROPIN.
EMBL; V01542; G758262; -.
EMBL; J00749; G205176; -.
EMBL; D00576; G220808; -.
PIR; A01498; UTRTB.
PIR; A01498; UTRTB.
PIR; S42527; S42527.
HSSP; P01233; 1HCN.
                                                                                                                                                                               CHAIN
                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
MEDLINE; 85080043.
JAMESON L., CHIN W.W., HOLLENBERG A.N.,
J. BIOL. CHEM. 259:15474-15480(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN-SPRAGUE-DAWLEY;
MEDLINE; 83273673.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LHB
                                                                                                                                                                                                                                                                                                                                 STRAIN-WISTAR-IMAMICHI; TI
KATO Y., EZASHI T., HIRAI
                                                                                                                                                                                                                                                                                                                                                                                                                        HABENER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EUKARYOTA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RATTUS NORVEGICUS (RAT)
                                                                                                                                                                                        SIGNAL
                                                                                                                                                                                                                                                                                                                                KATO Y., EZASHI
                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 4-141
                                                                                                                                                                                                                                                                                                                                                                                                                                CHIN W.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EUTHERIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LUTROPIN
                                                                                                                                                                                                HORMONE;
                                   198
  258
                  87
                                                    27
NATL.
                                                                     Similarity
70; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                        J.F.
                                                                                                                                                                                                SIGNAL;
                                                                                                                                                                                                       PS00261; GLYCO_HORMONE_BETA_1; PS00689; GLYCO_HORMONE_BETA_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RODENTIA.
                                                                                                                                                                                                                                                                                                                         7:877-885(1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                GODINE J.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                ACAD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (REL. 01, CREATED)
(REL. 01, LAST SEQUENCE UPDATE)
(REL. 34, LAST ANNOTATION UPDATE)
IA CHAIN PRECURSOR (LUTEINIZING HORMONE) (LSH-B) (LH-B).
                                                                    23.5%;
larity 64.2%;
Conservative
                                                                                                                        21
29
43
46
58
                                                                                                         A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                GLYCOPROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                               SCI.
                                                                                                                  141
141
77
92
130
108
110
120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHORDATA;
                                                                                                         15177
                                                                                                                                                                                                                                                                                                                                                  z
                                                                                                                                                                                                                                                                                                                                                                                                                ◁
                                                                                                                                                                                                                                                                                                                                 TISSUE-ANTERIOR AI T., KATO T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                KLEIN
                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                ;
;
                                                                                                         MW;
                                                                                                                                                                                                                                                                                                                                                                                                               ·
                                                                    Score 597;
Pred. No. 1.
23; Mismatc
                                                                                                                       LUTROPIN BETA CHAIN.
BY SIMILARITY.
                                                                                                                  PROBABLE
                                                                                                                                                                                                                                                                                                                                KATO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                               80:4649-4653(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                D.R., CHANG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                        6E0C19BA CRC32;
                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          141
                                                                              .49e-113;
                                                                                      DB 1;
                                                                                                                                                                                                                                                                                                                                          PITUITARY;
                                                                                                                                                                                                                                                                                                                                                                             CHANG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                A.S.,
                                                                      16;
                                                                                                                                                                                                                                                                                                                                                                            A.S.,
                                                                                      Length 141;
                                                                                                                                                                                                                                                                                                                                                                                                                                 TAN
                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                L.K.,
                                                                                                                                                                                                                                                                                                                                                                             HABENER
  306
                  135
                                                                                                                                                                                                                                                                                                                STIMULATING
                                                                     0
                                                                    Gaps
                                   257
                                                   86
                                                                      0
```

```
S
                                                                                                                                                                                밁
                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Search completed: Wed May Job time: 21 secs.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE SEQUENCE.

RARASEV V.S., PANKOV Y.A.;

RI BIOKHMITA 50:1972-1986(1985).

RL BIOKHMITA 50:1972-1986(1985).

RE TESTENDIN: PROMOTES SPERMATOGENESIS AND OVULATION BY STIMULATING COTTAIN THAT AND A UNIQUE BETA COMMON ALPHA CHAIN AND GONADOTROPIN.

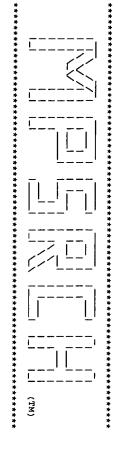
RE PROSITE; PROMOSO; GLYCO_HORMONE_BETA_1; 1.

RE PROSITE; PSOMOSO; GLYCO_HORMONE_BETA_2; FALSE_NEG.

RE PROSITE; PSOMOSO; GLYCO_HORMONE_BETA_2; FALSE_NEG.

RE PROSITE; PSOMOSO; GLYCO_HORMONE_BETA_1; 1.

RE PROSITE; PSO
                                                                                                                                                                                                                                                                                                                                                           Query Match 23.4%;
Best Local Similarity 60.6%;
Matches 66; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LUTROPIN BETA CHAIN (LUTEINIZING HORMONE) (LSH-B) (LH-B).
LHB.
BALABNOPTERA ACUTOROSTRATA (MINKE WHALE) (LESSER RORQUAL).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
LTTHERIA; CETACEA.
                                                                                                                                                                                                                                            198
                                                                                                                        258
                                                                                                                                                                                67
                                                                                                                                                                                                                                6 09:03:50 1998
                                                                                                                                                                                                                                                                                                                                                           Score 595; DB 1; Le
Pred. No. 4.61e-113;
25; Mismatches 17;
                                                                                                                                                                                                                                                                                                                                                                                                                    Length 118;
                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                           ;
                                                                                                                                                                                                                                                                                                                                                           Gaps
```



Release 3.0.5AA John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1997 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch\_pp protein - protein database search, using Smith-Waterman algorithm

Tabular output not generated. Wed May 6 09:04:08 1998; MasPar time 17.16 Seconds 824.654 Million cell updates/sec

Run on:

Description: Perfect Score: >US-08-804-166-8 (1-336) from US08804166.pep 2541 1 SRTSLLLAFGLLCLPWLOEG SRTSLLLAFGLLCLPWLQEG......PSLPSPSRLPGPSDTPILPQ 336

Scoring table: PAM 150 Gap 11

Searched: 140555 seqs, 42109429 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database:

sptremb15
1:sp\_fung1 2:sp\_human 3:sp\_invertebrate 4:sp\_mammal
5:sp\_mhc 6:sp\_organelle 7:sp\_phage 8:sp\_plant
9:sp\_bacteria 10:sp\_rodent 11:sp\_virus 12:sp\_vertebrate
13:sp\_unclassified

Statistics: Mean 43.140; Variance 76.550; scale 0.564

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

1 3 3 4 4 4 5 5 7 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Result No.
1024 1024 975 945 595 595 582 582 361 361 303 303 304 204 271	Score
40.3 38.4.3 37.22 23.5 22.9 116.9 113.9 113.9 111.0 111.0 111.0	Query
145 471 180 135 135 141 141 141 141 141 141 141 141 141 14	Length
1122 122 122 122 122 122 122 122 122	В
Q13991 Q19131 Q19131 Q19132 Q619102 Q60844 Q60844 Q631313 Q91325 Q913050 Q13050 Q13051 Q13051 Q13051 Q13051 Q13051	ID
BETA-GONADOTROPIN. CHORIONIC GONADOTROPIN TUMOR NECROSIS FACTOR- TUMOR NECROSIS FACTOR- TUMOUR NECROSIS FACTOR- TUMOUR NECROSIS FACTOR LUTEINIZING HORMONE BE TESTICULAR LUTEINIZING LUTEINIZING HORMONE BE GONADOTROPIN II BETA S GONADOTROPIN II BETA SUBU GONADOTROPIN I BETA CHAIN THYROTROPIN BETA CHAIN THYROTROPIN BETA SUBUN	Description
1.18e-204 3.17e-193 3.95e-193 3.95e-193 3.95e-105 3.35le-105 3.51e-105 3.51e-105 3.56e-50 4.94e-68 4.94e-68 4.94e-44 4.14e-44	Pred. No.

45	44	43	42	41	40	39	38	37	36	35	34	ω S	32	31	30	29	28	27	26	25	24	23	22	21
178	178	179	178	178	178	179	178	180	180	180	182	187	206	205	210	210	214	214	214	249	250	250	249	250
7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.1	7.1	7.1	7.2	7.4	8.1	8.1	8.3	8.3	8.4	8.4	8.4	9.8	9.8	9.8	9.8	9.8
440	440	425	411	411	411	401		401 1										349 1		426	418	380	277	253
N	N	2	N	Ν	N	N		10			2		_	10			11	11		ν			N	2
015531	014763	Q16042	014720	015508	015517	000300	Q63199	008727	014798	Q92956	014755	002764	Q62327	Q63012	085308	Q15962	Q89118	860680	Q85407	014865	000275	000280	014866	000276
APOPTOSIS INDUCING PRO	APOPTOSIS INDUÇING REC	TUMOR NECROSIS FACTOR	DEATH RECEPTOR 5.	P53-REGULATED DNA DAMA	CYTOTOXIC TRAIL RECEPT	OSTEOPROTEGERIN.	FAS ANTIGEN PRECURSOR.	OSTEOPROTEGERIN.	CYTOTOXIC TRAIL RECEPT	HERPESVIRUS ENTRY MEDI		OX40 PRECURSOR (FRAGME	TUMOR NECROSIS FACTOR	TESTICULAR LUTEINIZING	SECRETED RECEPTOR BIND	THYROTROPIN BETA SUBUN	SOMALIA-1977 RIGHT NEA	GARCIA-1966 RIGHT NEAR	HOMOLOG OF VACCINIA VI	DEATH RECEPTOR 3 BETA.	LYMPHOCYTE ASSOCIATED	LYMPHOCYTE ASSOCIATED	SOLUBLE DEATH RECEPTOR	LYMPHOCYTE ASSOCIATED
3.24e-15	3.24e-15	2.10e-15	.24€	3.24e-15	3.24e-15	2.10e-15	3.24e-15	1.36e-15	1.36e-15	1.36e-15	5.67e-16	6.32e-17	1.32e-20	2.07e-20	.15e-	.15e-		3.49e-22	.49e-		1.96e-29		3.14e-29	1.96e-29

# ALIGNMENTS

DITAC	I RES	В	g g	Db dg	2 111 0	SQ	DR RA	R R R	8888	ST T T A	RES
1996 (TREMBLREL. 01, CREATED) 1996 (TREMBLREL. 01, LAST SEQUENCE 1998 (TREMBLREL. 05, LAST ANNOTATI	QY 318 SLPSPSRLPGPSDTPILPQ 336  RESULT 2  ID Q14000 PRELIMINARY; PRT; 165 AA.	SLPSPSRLPGPSDTPILPQ 145	67 IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQASSSSKAPPP 126	7 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 66 	Query Match 40.3%; Score 1024; DB 2; Length 145; Best Local Similarity 99.3%; Pred. No. 1.18e-204; Matches 138; Conservative 0; Mismatches 1; Indels 0; Gaps 0	SIGNAL. SEQUENCE 145 AA; 15488 MW; AC321C60 CRC32;	TALMADGE K., VAMVAKOPOULOS N.C., FIDDES J.C.; NATURE 307:37-40(1994). EMBL; X00266; E27486;		BETA GUNADUTKOPIN. HOMO SAPIENS (HUMAN). EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA; EUTHERIA; PRIMATES.	Q13991; 01-NOV-1996 (TREMBLREL. 01, CREATED) 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE) 01-NOV-1996 (TREMBLREL. 01, LAST ANNOTATION UPDATE)	RESULT 1 ID Q13991 PRELIMINARY; PRT; 145 AA.

```
RESULT 4
ID Q95185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
ID 01
                                                                                                                                                                                 ş
                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOR RACE OCCUPANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SON DE REAL SON DE
                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                          S
                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LT 3
019131
                                                                                                                                                                                                                                                                                                                                                                                                                                                 LEE E.-K., TALYOR M.J., KEHRLI M.E.;
SUBMITTED (AUG-1997) TO EMBL/GENBANK/DDBJ DATA
EMBL, U90937; GZ290398; -
PROSITE: PS00652; TNFR.NGFR.1; 3.
SEQUENCE 471 AA; 51368 MW; 1D60FF4A CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BOS TAURUS (BOVINE).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA;
EUTHERIA; ARTIODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-JAN-1998 (TREMBLREL. 05, CREATED)
01-JAN-1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)
01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDAT
TUMOR NECROSIS FACTOR-RECEPTOR I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   019131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BOIME I.;
J. BIOL. CHEM. 258:11492-11499(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. MEDLINE; 84008141.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EUKARYOTA; METAZOA;
EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHORIONIC CGB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE; 84008141.
POLICASTRO P., OVITT C.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                147
                                                                                             143
                                                                                                                                       161
                                                                                                                                                                                                                             101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       198
                                                                                                                                                                                                                                                                                                                                                             y Match 38.4%;
Local Similarity 67.8%;
hes 116; Conservative
                                                                                                                                                                                   83
                                                                                                                                                                                                                                                                                              41 ESPCPQGKYNHPQNSTICCTKCHKGTYLYNDCPGPGRDTDCRVCAPGTYTALENHLRRCL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27
                                                                                                                                                                                                                                                                            23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Match 40.3%;
Local Similarity 99.3%;
es 138; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SLPSPSRLPGPSDTPILPQ 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KONTYCTCHAGFFLRENECYSCSNCKKSLECTKLCLPQIENYKGTEDSGTT
                                                                                                               IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQASSSSKAPPP 146
                                                                                                                                                                                                                                                                     DSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GONADOTROPIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BETA SUBUNIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HOSHINA M.,
                                                                                                                                                                                                                                                                                                                                                             Pred.
27; N
                                                                                                                                                                                                                                                                                                                                                                                       Score 975; DB 4; Length 471; Pred. No. 3.72e-193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 1024; DB 2; pred. No. 1.18e-204; 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B1CAA0B1 CRC32;
                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             471
  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FUKUOKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ξ
    ⋛
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               н.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 165;
                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BOOTHBY
                                                                                                                                  210
                                                                                                                                                                                                                                                                                                                                                             ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   M.R.,
                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                     82
                                                                                                                                                                                                                                                                                                                                                             ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
밁
                                                                           ş
                                                                                                                                                              皮
                                                                                                                                                                                                                                                                                                                                                                                                            SO PRESENTATION OF THE PROPERTY OF THE PROPERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE SERVING SERVING
                                                                                                                                                                                                                                         Query Match 23.5%;
Best Local Similarity 66.4%;
Matches 71; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 37.2%;
Best Local Similarity 86.0%;
Matches 117; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        O19102;
O1-JAN 1998 (TREMBLREL. 05, CREATED)
O1-JAN 1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)
O1-JAN 1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
LUTELNIZING HORMONE BETA SUBUNIT (FRAGMENT).
CERATOTHERIUM SIMUM (WHITE RHINOCEROS) (SQUARE-LIPPED)
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      UT 5
019102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q95185;

01-FEB-1997 (TREMBLREL. 02, CREATED)

01-FEB-1997 (TREMBLREL. 05, LAST SEO

01-JAN-1998 (TREMBLREL. 05, LAST ANN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-PITUITARY GLAND;
SHERWAN G.B., LUND L.A.;
SUBMITTED (SEP-1996) TO EMBL/GENBANK/DDBJ DATA
EMBL; U72659; G2462779; -...
NON_TER 1 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-PITUITARY GLAND;
MEDLINE; 97449288.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.

DUTHLE S., NASTR L., ECKERSALL P.D.;

SUBMITTED (OCT-1996) TO EMBL/GENBANK/DDBJ

EMBL; U72344; G1613880; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; EUTHERIA; CARNIVORA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TUMOUR NECROSIS
TNFR-1.
                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SHERMAN G.B., LUND L.A., BUNICK D., GENE 195:131-139(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FELIS SILVESTRIS CATUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EUTHERIA; PERISSODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS00652; TNFR_NGFR_1; 3.
                                                                               198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      165 TVCTCHAGFFLRGNEC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       45 CPQGKYIHPQDNSICCTKCHKGTYLYNDCAGPGLDTDCRECENGTFTASENYLRQCLSCS 104
81
                                                                                                                                                          21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26
                                                                                                                    PLCRPINATLAAENEACPVCITFTTSICAGYCPSMVRVLPAALPPAPQPVCTYHELRFAS 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYCTCHAGFFLRENEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KCRKEMYQVEISPCTVYRDTVCGCRKNQYRYYWSETHFQCLNCSLCLNGTVQISCKETQN 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCLNGTVHLSCQEKQN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CPQGKYIHPQNNSICCTKCHKGTYLYNDCPGPGQDTDCRECESGSFTASENHLRHCLSCS 85
                                                                               PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180 180
180 AA; 20399 MW; 5452A6B2 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                        135 AA; 14212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (CAT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RECEPTOR P60
                                                                                                                                                                                                                                                                                                                                                                                                        MW;
                                                                                                                                                                                                                                     Score 596; DB 4; I
Pred. No. 2.28e-105;
20; Mismatches 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 945; DB 4; I
Pred. No. 3.95e-186;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9; Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                        F4F196D2 CRC32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE UPDATE)
ANNOTATION UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WINN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ж.
...,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DATA BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 180;
                                                                                                                                                                                                                                                                                                                     Length 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RHINOCEROS).
                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                         0
```

IRLPGCPPGVDPMVSFPVALSCRCGPCRLSSSDCGGPRAQPLACDRP

```
RESULT
ID Q
     RESULT 8
                                                                   Ş
                                                                                                      밁
                                                                                                                                   á
                                                                                                                                                                    용
                                                                                                                                                                                                                                                                      SOR REAR ROOM OF THE ROOM OF THE REAR ROOM OF THE REAR ROOM OF THE REAR ROOM OF THE ROOM OF THE REAR ROOM OF THE ROOM OF THE REAR ROOM OF THE ROOM O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SORE RECEIVED TO AC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                      Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local :
                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
STRAIN-SPRAQUE DAWLEY;
STRAIN-SPRAQUE DAWLEY;
MEDLINE; 95283549.
ZHANG F.P., RANNIKKO A., HUHTANII
BIOCHEM. BIOPHYS. RES. COMMUN. 2:
EMBL; U25653; G915217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-1996 (
01-NOV-1996 (
01-JAN-1998 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q62778;
01-NOV-1996
01-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LT 7
Q60844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LT 6
Q62778
                                                                                                                                                                                                                                                                                    SUBMITTED (AUG-1995) TO EMBL; U25145; G930345; MGD; MGI:96782; LHB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1996 (TREMBLREL.
01-NOV-1996 (TREMBLREL.
01-NOV-1996 (TREMBLREL.
TESTICULAR LUTEINIZING H
                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN-129 SVEV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          260844;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RATTUS NORVEGICUS (RAT).
EUKARYOTA; METAZOA; CHORDATA;
                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                     KAPUR V., MATZUK M.M.;
                                                                                                                                                                                                                                                                                                                                                                                                          EUTHERIA; RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                         EUKARYOTA;
                                                                                                                                                                                                                                                                                                                                                                                                                                       MUS MUSCULUS (MOUSE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EUTHERIA;
                                                                                                                                      198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      258
                                                                     258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     87
                                                                                                                                                                                                     Local Similarity
mes 68; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          85 VRLPGCPPGVDPIVSFPVALSCRCGPCRLSSSDCGGPRTQPMTCDLPHL 133
                                                                                                                                                   27 PLCRPVNATLAAENEFCPVCITFTTSICAGYCPSMVRVLPAALPPVPQPVCTYRELAFAS 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                 VRLPGCPPGVDFIVSFPVALSCRCGPCRLSSSDCGGPRTQPMACDLPHL 135
:|||||| ||:|:||:|| ||::|| ||::|| ||::|
IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRF 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDP
                                                                                                                                   PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23.4%;
Similarity 63.3%;
69; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              139 AA;
                                                                                                                                                                                                                                                                      141 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                         METAZOA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TREMBLREL. 01, CREATED)
(TREMBLREL. 01, LAST SEQUENCE UPDATE)
(TREMBLREL. 05, LAST ANNOTATION UPDATE)
HORMONE BETA (LUTENIZING HORMONE BETA-SUBUNIT).
                                                                                                                                                                                                     Conservative
     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                  22.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                        CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14880 MW;
                                                                                                                                                                                                                                                                     15028 MW;
                                                                                                                                                                                                                                                                                                                       TO EMBL/GENBANK/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . 01, CREATED)
. 01, LAST SEQUENCE UPDATE)
. 01, LAST ANNOTATION UPDATE)
HORMONE BETA-SUBUNIT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HUHTANIEMI I.;
DMMUN. 210:858-865(1995)
                                                                                                                                                                                                 Score 582; DB 10;
Pred. No. 3.51e-102;
24; Mismatches 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 595; DB 10;
Pred. No. 3.86e-105;
24; Mismatches 16;
     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                        VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                     BE50AB2B CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5B2E7DBF CRC32;
     140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₽
                                                                                                                                                                                                                                                                                                                     DATA BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                        TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TETRAPODA;
                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          84
                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                   Ş
V
                                                                                                                                                                  밁
                                                                                                                                                                                               ş
                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SQ STITE
   SEE
                                                               RESULT 10
ID Q91121
                                                                                                                                                                                                                                                                                                                                     SOR RAKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 45; Conser
                                                                                                                                                                                                                                                                                                            MEDLINE; 9528334.

ZHANG F.P., RANNIKKO A., HUHTANALL BIOCHEM, BIOPHYS. RES. COMMUN. 21
EMBL; U25803; 6904026; -.

SPOUENCE 80 AA; 8515 MW; 74F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
 Q91121;
01-NOV-1996
01-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q63013;
01-NOV-1996 (
01-NOV-1996 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LT 9
Q63013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q98849;
01-FEB-1997 (TREMBLREL. 02, CREATED)
01-FEB-1997 (TREMBLREL. 02, LAST SEQUENCE UPDATE)
01-FEB-1997 (TREMBLREL. 02, LAST ANNOTATION UPDAT
GONADOTROPIN II BETA SUBUNIT PRECURSOR.
CARASSIUS AURATUS (GOLDFISH).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; PISCES;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBMITTED (OCT-1996) TO EMBL/GENBANK/DDBJ EMBL; D88024; G1644243; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RATTUS NORVEGICUS (RAT).
EUKARYOTA; METAZOA; CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-SPRAQUE DAWLEY;
MEDLINE; 95283549.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TLHB3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TESTICULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OSTEICHTHYES; ACTINOPTERYGII; CYPRINIFORMES
                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-PITUITARY GLAND;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                   232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         198 PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES 257
                                                                                                                                   292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           258
                                                                                                                                                    60 GGPRTQPMTCDLPHL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27 PPCEPVNETVAVEKEGCPKCLVLQTTICSGHCLTKEPVYKSPFSTVYQHVCTYRDVRYET
                                                                                                                                                                                                 MTRVLQGVLPALPQVVCNYRDVRFESIRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDC 291
                                                                                                                                                                                                                    GGPKDHPLTCDDPRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPR 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           h 16.9%;
Similarity 50.0%;
54; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RODENTIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96 (TREMBLREL.
96 (TREMBLREL.
96 (TREMBLREL.
R LUTEINIZING H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1
24
140
 (TREMBLREL.
                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ΑA;
                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23 P
140 G
15533 MW;
                                                                                                                                                                                                                                                                               15.4%;
                                                                                                                                                                  74
                                                                                                                                   306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . 01, CREATED)
. 01, LAST SEQUENCE UPDATE)
. 01, LAST ANNOTATION UPDATE)
HORMONE BETA SUBUNIT.
                                                                                                                                                                                                                                                                                                                                                                                     HUHTANIEMI I.;
                                                                                                                                                                                                                                                               Score 391; DB 10
Pred. No. 1.91e-1
18; Mismatches
CREATED)
LAST SEQUENCE UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 430; DB 12;
Pred. No. 4.94e-68;
22; Mismatches 32;
                                                                                                                                                                                                                                                                                                                                 74FA772D CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GONADOTROPIN II E
7205FD03 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POTENTIAL.
                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                    210:858-865(1995).
                                                                 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         80
                                                                                                                                                                                                                                                               DB 10; I
1.91e-59;
ches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ×.
                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TETRAPODA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PISCES; GNATHOSTOMATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BETA SUBUNIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 140;
                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                 ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                 Gaps
```

1;

86

0

```
RESULT
ID 01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
ID Q
     ş
                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOR REPORCED TO THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOT TRANSPORT
                                                                                                                                                                                                                                                                                                                                                                     밁
             O13050;
O1-JUL-1997 (TREMBLREL. 04, CARAL.
O1-JUL-1997 (TREMBLREL. 04, LAST /
O1-JUL-1997 (TREMBLREL. 04, LAST /
FORADOTROPIN I BETA SUBUNIT PRECU
E GONADOTROPIN (TOMMON CARP).
SCYPRINUS CARPIO (COMMON CARP).
FUKARYOTA; METAZOA; CHORDATA; VE
                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 4
 EUKARYOTA; MET OSTEICHTHYES; [1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHAIN
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.

TSAI H.J., YANG L.T.;

SUBMITTED (JAN-1994) TO EMBL/GENBANK/DDBJ DATA BANKS EMBL; L11722; G437308; -.

SEQUENCE 137 AA; 15330 MW; F87577B5 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-NOV-1996 (TREMBLREL 01
01-NOV-1996 (TREMBLREL 01
01-NOV-1996 (TREMBLREL 01
GONADOTROPIN BETA-SUBUNIT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LT 11
Q90225
                                                                                                                                                                                      013050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACANTHOPAGRUS LATUS.
EUKARYOTA; ANIMALIA; METAZOA;
ACTINOPTERYGII; PERCIFORMES;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q90225;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 J. MOL. ENDOCE EMBL; L35096;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE-PITUITARY GLAND;
MEDLINE; 96020549.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OSTEICHTHYES;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MORONE SAXATILIS (STRIPED BASS)
EUKARYOTA; METAZOA; CHORDATA; V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1996 (TREMBLREL. 01, LAST ANNOTATION UPDATE) GONADOTROPIN II BETA SUBUNIT PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HASSIN S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM
                                                                                                                                                                                                                                                           258
                                                                                                                                                                                                                                                                                                                                 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  198
                                                                                                                                                                                                                                                                                             86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               36 PPCQLINQTVSLEKEGCPKCHPVETTICSGHCITKDPVIKIPFSNVVQHVCTYRDLHYKT 95
                                                                                                                                                                                                                                                                                                                                                                     28
                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                        IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTC-DDPRF
                                                                                                                                                                                                                                                                                                                             IRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTC-DDPRF
                                                                                                                                                                                                                                                                                           FELPDCPLGVDPTVTYPVAVSCNCGLCAMDTSDCTFESLQPNFCMNDIPF 135
                                                                                                                                                                                                                                                                                                                                                                 PPCQLINQTVSLEKEGCPKCHPVETTICSGHCITKDPVMKTRY-VYQHV-CTYRDLHYKT 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENDOCRINOL. 15
15096; G598255;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1
33
147,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ELIZUR A., ZOHAR Y.;
DOCRINOL. 15:23-35(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14.2%;
llarity 44.5%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FAZOA; CHORDATA; VERTEBRATA; PISCES; GNATHOSTOMATA;
ACTINOPTERYGII; PERCIFORMES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                      13.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             222
                                                                                        04, CREATED)
04, LAST SEQUENCE UP
04, LAST ANNOTATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               XX;
                                                                                                                                                                                                                                                                                                                                                                                                     Score 353; DB 12;
Pred. No. 3.56e-51;
22; Mismatches 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 361; DB 12;
Pred. No. 6.60e-53;
24; Mismatches 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PERCOIDEI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POTENTIAL.
GONADOTROPIN II
; 292F2F62 CRC3:
                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                    CYPRINIFORMES
                                     VERTEBRATA; PISCES; GNATHOSTOMATA;
                                                                                                                                                                                    130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERTEBRATA;
SPARIDAE.
                                                                                                                                                                                    ⋛
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                       36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BETA SUBUNIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        36;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 147;
                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OSTEICHTHYES
                                                                                                                                                                                                                                                          306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ۳.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ļ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
ID QS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
RRRRROCOS DITIO
                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SO PER RECOCCION OF THE RESERVE OF T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOTTERRE
```

```
1 Q98848;
1 01-FEB-1997 (TREMBLREL. 02, CKLALL,
1 01-FEB-1997 (TREMBLREL. 02, LAST SEQUENCE UPDALE
1 01-FEB-1997 (TREMBLREL. 02, LAST SEQUENCE UPDALE
1 01-FEB-1997 (TREMBLREL. 02, LAST AUNOTATION UPDALE
2 GONADOTROPIN I BETA SUBUNIT PRECURSOR.

OS GONADOTROPIN I BETA SUBUNIT PRECURSOR.

OC CARASSIUS AURATUS (GOLDFISH).

OC CUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; PISCI
COTTEICHTHYES; ACTINOPTERYGII; CYPRINIFORMES.
                                                                                                                                                                                                                              RESULT 14
ID P79357
                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                           P79357;
01-MAY-1997 (TREMBLREL. (
01-MAY-1997 (TREMBLREL. (
01-MAY-1997 (TREMBLREL. (
THYROTROPIN BETA CHAIN.
KANIA S.A.,
SUBMITTED (F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LT 13
Q98848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
KOBAYASHI M., IWASAKI M., KONDO H., YOSHIURA Y., WAT.
SUBMITTED (MAY-1997) TO EMBL/GENBANK/DDBJ DATA BANKS
                                                                                               LAMA GLAMA (LLAMA).
EUKARYOTA; METAZOA; CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL.
                               TISSUE-PITUITARY;
                                                SEQUENCE FROM N.A.
                                                                                EUTHERIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; D88023; G1644241;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YOSHIURA Y., KOBAYASHI M., SUBMITTED (OCT-1996) TO EM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-PITUITARY GLAND;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; AB003583; D1020895; -.
                                                                                                                                                                                                                                                                                            259
                                                                                                                                                                                                                                                                                                                                                        200 CRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALP-QVVCNYRDVRFESI 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              259 RLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              200 CRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALP-QVVCNYRDVRFESI 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  85
                                                                                                                                                                                                                                                                                                                                                                             26 CRLINISITVESEECGSCITIDITACAGLCKTQESVYRSPL-MLSYQNTCNFREWTYETY 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26 CRLTNISITVESEECGSCITIDTTACAGLCKTQESVYRSPL-MLSYQNTCNFREWIYETY 84
                                                                                                                                                                                                                                                                                          RLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCD
                                                                                                                                                                                                                                                                                                                         EFKGCPARADSIFTYPVALSCECSKCNSDITDCGVLSQQTLGCN 128
                                                                                                                                                                                                                                                                                                                                                                                                                                    h 12.3%;
Similarity 40.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           h 12.6%;
Similarity 41.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                           42;
(FEB-1997) TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19
130
                                                                                ARTIODACTYLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19
130 å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Α,
                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14393 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14422 MW;
ODOM T.F.;
EMBL/GENBANK/DDBJ
                                                                                                                                               M., KATO Y., AIDA I
                                                                                                                                                                                                                                                                                                                                                                                                                      Score 312; DB 12; I
Pred. No. 2.21e-42;
23; Mismatches 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
PRECURSOR.
                                                                                                                                            CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 321; DB 12;
Pred. No. 2.68e-44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. 2.68e-
24; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        POTENTIAL.

GONADOTROPIN I BETA SUBUNIT
; 3C222BFD CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL.
GONADOTROPIN I BE
; 3D37E6B1 CRC32;
                                                                                               VERTEBRATA;
                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      K.;
J DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₹
                                                                                                                                                                                                                              ζ
 DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PISCES; GNATHOSTOMATA;
                                                                                               TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BETA SUBUNIT
 BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WATABE S.;
                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                            302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 302
                                                                                                                                                                                                                                                                                                                                                                                                                          Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2;
                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                          Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
```

Sobr

EMBL; U89294; G1872550; -. SEQUENCE 138 AA; 15571 MW; 332E4E82 CRC32;

```
ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOR RACE OCCUPANT OCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÔ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                             밁
Search completed: Wed May 6 09:05:27 1998 Job time: 79 secs.
                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 15
ID Q28376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 12.0%;
Best Local Similarity 47.9%;
Matches 46; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 12.0%; Score 304; DB 4; Le Best Local Similarity 47.9%; Pred. No. 1.10e-40; Matches 46; Conservative 17; Mismatches 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             028376:
01-NOV-1996 (TREMBLREL. 0
01-NOV-1996 (TREMBLREL. 0
01-NOV-1996 (TREMBLREL. 0
THYROTROPIN BETA CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
TISSUE-PITUITARY;
TISSUE-PITUITARY;
KANIA S.A., OLCHOWY T.W., FRANK L.A.;
SUBMITTED (MAR-1,996) TO EMBL/GENBANK/DDBJ DATA BANKS.
EMBL; U51789; G1262916; -.
SEQUENCE 138 AA; 15663 MW; 2DA6B024 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EQUUS CABALLUS (HORSE).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; PERISSODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80 KTVEIPGCPHHVTPYFSYPVAVSCKCGKCDTDYSDC 115
:::||||:|| ||:||:|| :||
256 ESIRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDC 291
                                                                                                                                                                                                                                                                                        256 ESIRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDC 291
                                                                                                                                                                                            80 KTVEIPGCPDHVTPYFSYPVAVSCKCGKCNTDYSDC 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01, CREATED)
01, LAST SEQUENCE UPDATE)
01, LAST ANNOTATION UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 306; DB 4; Le
Pred. No. 4.14e-41;
18; Mismatches 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        138 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 138;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                  6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6,
                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  4;
```

### THIS PAGE BLANK (USPTO)